

EDUCATORS' CONCEPTUALISATION OF IMPLEMENTATION OF CURRICULUM
AND ASSESSMENT POLICY STATEMENT AT GRADE NINE IN
KWAZULU-NATAL, SOUTH AFRICA

By

MUZONJANI ZACHARIA ZULU

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Supervisor: PROF MC MAPHALALA

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DECLARATION

I, MUZONJANI ZACHARIA ZULU, hereby declare that this thesis – which is submitted to the University of South Africa for the Doctoral Degree in Education – has not been submitted by me for any other degree at this or any other university. I further declare that this is my own work, and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.



10 January 2018

Signature

Date

6745849

DEDICATION

First of all, I sincerely dedicate this thesis to my late father, HOLOBHISA KAIZER ZULU and my living mother, FIKEPHI SOMVESHE ZULU who laid the foundation in my early years and invested in my studies.

Secondly, I dedicate this thesis to the memory of my late brother, ENOS BHEKINDODA ZULU, and my late sisters, BONISIWE ZULU and JABULILE ZULU for their encouragement, kindness, and support. They may be late, but will never be forgotten!

Thirdly, I dedicate this thesis to the following:

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ABSTRACT

This study sought to investigate how teachers in Grade 9 conceptualize and implement the Natural Science Curriculum and Assessment Policy Statement (CAPS) in KwaZulu Natal. In South Africa, there have been major curriculum changes since the dawn of democracy in 1994. These changes have been criticized by various stakeholders in the education sector, including unions, parents and teachers. Since 1994, the curriculum has been revised constantly to address the concerns raised by the society. This study therefore sought to develop an understanding of what influences educators in their endeavors to implement Natural Science CAPS in Grade 9 classrooms. The study further aimed at understanding, from the educators' perspectives, how policy implementation challenges their traditional ways of teaching and learning.

This study adopted a qualitative research design. Focus groups interviews, observations and documentary analysis were used as method of data collection to answer the research questions. Purposive sampling was used to select 9 teachers from six different schools in three districts in the Province of KwaZulu Natal (KZN), namely Zululand, uThungulu and uMzinyathi to participate in the study.

The findings reveal that the participants are knowledgeable about the CAPS principles and they all use prescribed principles in their planning, albeit in different ways. The study reveals that workshops and in-service training organized by the Department of Basic Education were useful in preparing teachers to implement CAPS even though the period of training was insufficient.

LIST OF ACRONYMS AND ABBREVIATIONS

CAPS	Curriculum Assessment Policy Statement
C2005	Curriculum 2005
DBE	Department of Basic Education
DoE	Department of Education
FET	Further Education and Training
GET	General Education and Training
HoD	Head of Department
KZN	KwaZulu-Natal
NCS	National Curriculum Statement
OBE	Outcomes-based education
RNCS	Revised National Curriculum Statement
SA	South Africa
SASA	South African Schools Act
SGB	School Governing Body
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNISA	University of South Africa
USA	United States of America

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CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.1 BACKGROUND AND MOTIVATION OF THE STUDY

In 1994, the South Africa's democratic government took over a divided and unequal system of education from the apartheid government (Maphalala, 2006). Maphalala contends that under apartheid, South Africa had nineteen different educational departments separated by race, geography and ideology. The then Minister of Education, Prof. S. B. Bhengu, had a challenging task of introducing a new education system which would transform the lives of all South Africans irrespective of race, colour and geographical location. He launched a new curriculum called Curriculum 2005 (C2005), which was scheduled for implementation in 1998 at Grade 1 level, and in 1999, at Grade 7 (DoE, 1997). The implementation of C2005 was expected to be in operation in all classes by 2005; however, this could not happen as it faced serious challenges that necessitated its revision. Maphalala (2006) observes that the implementation problems started almost immediately when the Department of Education was unable to stick to its timetable.

That Curriculum had three features: namely outcomes-based education (OBE), an integrated knowledge system and learner-centred education (DoE, 1997). Due to poor implementation, curriculum experts like Jansen (1999) cautioned that C2005 would not be successful. In support of his statement he quoted similar curricula in countries like Australia, New Zealand, Scotland and Canada, where OBE approach had failed. He further stated that the policy of OBE was driven by politicians, who had less knowledge about the classroom situation.

Furthermore, Maphalala (2006), citing Van Rooyen and Prinsloo (2003) identifies the following as major problems with Curriculum 2005:

- While many educators and officials endorsed the underlying principles of learner participation, activity based education, emphasis on relevance, flexibility, anti-bias, inclusion, holistic development, critical thinking and integration; few understood the hugely complicated system.

- There were structure and design flaws in the Curriculum 2005:
 - I. Everyone was floored by complex language and confusing terminology, meaningless jargon, vague and ambiguous language.
 - II. The curriculum was overcrowded, i.e. it tried to cover too much.
 - III. Sequence, pace and progression were not well designed.
 - IV. There was little conceptual coherence, mainly because curriculum designers had attempted to avoid prescribing content.
- There was no alignment between curriculum and assessment policy, as well as a lack of clarity regarding assessment policy and practice.
- Teacher training in the new curriculum had been inadequate. Most of the training time had gone into explaining the complex vocabulary; and too little into the substance of OBE. Educators did not apply the principles of OBE in their own methodology.
- Textbooks varied wildly in quality and were often unavailable. The quality of books was variable as a result of design flaws in Curriculum 2005 and unreliability of the evaluation process. There was overall low use of the learning materials for a variety of reasons. A follow-up support of educators by departmental officials was not sufficient. ‘
- The time frames used had been unmanageable and unrealistic. Implementation had been rushed and therefore inadequate. Curriculum 2005 was implemented before it was ready for presentation and without the foundations for good, inspiring, effective monitoring, and a meaningful, ongoing support process being in place.

The challenges raised by the teachers, teacher unions and other eminent scholars as detailed by Maphalala (2006), citing Van Rooyen and Prinsloo (2003), compelled the Department of Education to review and revise the curriculum to accommodate the concerns of stakeholders. The Department of Education convened a meeting with all other relevant stakeholders in order to have proper consultations. Consultations with relevant stakeholders gave birth to the streamlined curriculum called Revised National Curriculum Statement (RNCS), which later became the National Curriculum Statement (NCS) (DoE, 2003). However, challenges related to the implementation would not disappear; there were still calls from the educators to deal with inherent problems in the curriculum. The challenges of teaching various subjects without resources in the

schooling system remained. The NCS implementation shortcomings also necessitated its refinement.

In 2009, the Ministerial Committee was tasked with the review of the implementation of the National Curriculum Statement resulting in a Curriculum and Assessment Policy Statement (CAPS). CAPS was introduced to strengthen the National Curriculum Statement in order to improve the quality of teaching and learning in our schools (DBE, 2011). With the introduction of CAPS, every subject in each grade has a single, comprehensive and concise policy document that provides details on what educators need to teach and assess on a grade-by-grade and subject-by-subject. According to the Department of Basic Education (DBE) (2012), the aim of the NCS review was to lessen the administrative load on educators and to ensure that there is a clear guidance and consistency for educators teaching Grade R up to Grade 12 subjects.

Most of the changes subsequent to the implementation of a post-apartheid curriculum in South Africa have been directly or indirectly driven by the teachers through their unions or through research that has been conducted on their experiences in implementing the curriculum. Teachers are directly involved with the implementation of the curriculum and interact with the curriculum on daily basis. Therefore, they should be at the forefront of curriculum transformation since they are in a better position to see what works and what does not work in the classroom situation in relation to the outcomes that need to be attained.

During the implementation of CAPS in 2012, the Department of Basic Education started with Grade R and Grade 3 (Foundation Phase) simultaneously with Grade 10 (FET Phase). In 2013, CAPS was introduced at Grade 4 to Grade 6 (Intermediate Phase) and Grade 11 (FET Phase). In 2014, CAPS was introduced at Grades 7 to 9 (Senior Phase) as well as Grade 12 which is FET Phase (DBE, 2011).

The DoE Final Report (2009), cited in Machaba (2013:50), points out that the inherent flaws in C2005 became obvious by early 2000. The actual introduction of new education rules or guidelines at classroom level was not as simple as applying methods and teaching strategies. Comparing previous curriculum to the existing curriculum (CAPS), this is what März and Kelchtermans (2013:13) had to say:

- i. *Curriculum and Assessment Policy Statement is not different from the previous curriculums.*
- ii. *Children are still unable to read, write or count, and they lack general knowledge.*
- iii. *Previous curriculums were about attitudes, competencies and dispositions, but they lacked proper planning for inclusive learning, required learning talents as well as basic understanding.*
- iv. *Similarly, CAPS is unable to provide understanding of subject matter and it lacks the direction of success in terms of teaching and learning.*

Krüger, Won and Treagust (2013: 42) concurred by adding that CAPS lacks the building blocks of the curriculum practices and teaching methods of the subject matter. After the criticism, the Minister of Basic Education, Angie Motshega decided to implement the recommendations of the Review Committee. The Review Committee recommended that:

- i. *The Minister of Basic Education should come up with a clear plan in order to make education accessible to every learner.*
- ii. *The strategic plan must be made available throughout SA for the sake of educators and learners' benefit.*
- iii. *Avoiding further criticism, all stakeholders must be involved in planning – it must not be a top-down suggestion, then districts and advisers only, educator unions must be involved in planning.*
- iv. *The panel advised that NCS must not be dependent on subject advisors and district staff, but educators must also be involved in developing tools for interpreting policies and guidelines Machaba (2013: 53-54).*

Beside the above criticisms, Machaba (2013: 50) has her own understanding of CAPS. She believes that

- i. *CAPS is the good curriculum because its terminologies are understandable.*
- ii. *Even though other educators are struggling to implement it learners are benefiting from it.*
- iii. *Lastly, CAPS brings relevant changes in the education system of South Africa".*

In trying to address some of the concerns in the school curriculum, Chisholm (2005:82) views the sharing of knowledge, expertise and lessons learnt among countries in the region as important. But she criticised as possibly hazardous the direct transfer of ideas developed from a different context. She believes that contexts are likely to be unpredictable.

Other scholars who support the ideas of Chisholm are Mapotse and Gumbo (2013:1). They are of the opinion that the change of C2005 and NCS into CAPS was caused by the challenges educators encountered regarding their understanding of the curriculum in terms of constraints they faced during implementation. That is why Morris (2002: 15) suggested that in order for the educators to be enthusiastic and concentrate on what they intend to achieve, the working together of educators and stakeholders must be increased, every participant must be included in making the curriculum and creation of development, and new methods must be introduced for the best facilitative techniques.

Other scholars have different views about CAPS. Warnich and Meyer (2013:38) say that "although educators show willingness to utilise some of the learner-centred instruction strategies, but the tendency to implement traditional teacher-centred instruction strategies is much stronger". This is because of the way educators perceive the curriculum which has a profound impact on the implemented curriculum and the educational change (Krüger *et al.* 2013:44). But for learners, CAPS encourages them to play as well as to learn with concentration, instead of repeating what is in the books (Warnich & Meyer 2013:15). This study therefore sought to investigate the Natural Science teachers' conceptualization of the Curriculum and Assessment Policy Statement (CAPS) in Grade 9 class.

1.2 STATEMENT OF THE PROBLEM

The NCS was introduced to educators without explaining the principles embodied in it as well as the learning programmes, work schedules and lesson plans that should be included in Natural Science (DoE, 2003b). Mqwebu (2009), citing Qwase (2007), argues that facilitators at the workshops of Natural Science did not explain to educators how to use terms like the Learning Outcomes and their accompanying Assessment Standards in implementing CAPS. In a number of schools observed by

the researcher, the lack of suitably qualified Natural Science teachers led to the belief that Natural Science is a difficult subject. Mnguni (2013) argues that this perception is exacerbated by the fact that not all terminologies like Learning Outcomes (LOs) and their accompanying Assessment Standards (Ass) were clearly explained during workshops, neither their integration within with Natural Science. He therefore argues that educators teach the products of Natural Science they are presented in the learning, teaching and support materials (LTSMs) and as a result, they use outdated methods such as textbook teaching, instead of teaching learners based on the three LOs and the accompanying ASs of Natural Science. Consequently, they should be guided by the core knowledge for learners to learn what they come across (DoE, 2002c: 61-75).

The Curriculum and Assessment Policy Statement (CAPS) document for Natural Science Grades 7 – 9 (DBE, 2011) states that Natural Science is critical for promoting and developing scientific literacy as learners may elect not to continue with one of the science subjects beyond Grade 9. The study of Natural Science must therefore enable learners to make sense of the world in scientific terms and prepare them for a continuation of science studies into the FET phase and beyond. It has been discovered that most learners fail Physical Science at their exit class of FET level because they lack solid foundation from previous grades (DBE, 2011). Anthony (2015) argues that it is important that Natural Science teachers motivate senior- phase learners by introducing them to interesting teaching methods and to adopt a problem-centred approach. It therefore remains to be seen whether Natural Science teachers do heed the advice by Anthony (2015). This study therefore sought to investigate how Natural Science teachers in Grade 9 class conceptualize and implement the Natural Science curriculum through CAPS.

Against the given background above, this study intends to address the following main research questions:

1. How do Grade 9 educators teach Natural Science in their respective schools?
2. What kind of training was received by Grade 9 Natural Science educators during their workshops?
3. What kind of support do Grade 9 Natural Science educators received from the Department of Basic Education?

4. What knowledge, attitudes and perceptions are held by Senior Phase educators in teaching Natural Science at grade nine?

1.3 SIGNIFICANCE OF THE STUDY

This study was conducted to understand how Natural Science teachers implement CAPS in their respective classrooms, determine if they were adequately trained to implement the curriculum and find out if there are any contextual factors that support or constrain the interpretation of the curriculum and its implementation in schools. The findings of this study would therefore assist the education stakeholders in various ways:

- i. Recommendations are made to improve teaching and learning of Natural Science at Senior Phase in schools.
- ii. It proposes piloting of any curriculum before it is implemented.
- iii. The training of senior phase educators need to be assessed before the curriculum is implemented to ensure that it would be adequate enough to equip educators with the skills to teach the curriculum.
- iv. The study identifies the kind of assistance necessary for senior phase educators to successfully implement the curriculum.

1.4 DEFINITIONS OF TERMS

1.4.1 Educators. Educator is a South African term that is used to refer to a primary and high school teacher (DBE, 2011). Educators are the people who teach learners. They transmit knowledge in the form of teaching; they are specialists in their subject content.

1.4.2 Conceptualization. This means to form an idea of something – to form an idea about what something is like or how it should work. Something thought or imagined; something that somebody has thought up; or that somebody might be able to imagine.

1.4.3 Curriculum. This is the planned interaction of pupils with instructional content, materials, resources and processes for evaluating the attainment of educational objectives. Curriculum is the learning which is planned and

guided by the school, whether it is carried out in groups or individually, inside or outside the school.

1.4.4 CAPS. CAPS or Curriculum and Assessment Policy Statement is a single, comprehensive and concise policy document which replaces the current Subject and Learning Area Statements, Learning Programme Guidelines and Subject Assessment Guidelines for the subjects in the NCS Grades R-12 (DBE, 2011).

1.5 DELIMITATION OF THE STUDY

The study focuses on how educators conceptualize the implementation of CAPS particularly in the teaching of Natural Science at senior phase level in the Province of KwaZulu-Natal. Participating educators were selected in high schools offering Natural Science at Grade 9. The researcher delimited the study to three districts, namely uThungulu district, uMzinyathi district and Zululand district where six high schools were identified to participate in the study. All high schools selected were quintile 1 schools. Every year the Minister determines the national quintiles for public schools which must be used by the MEC's to identify schools that may not charge school fees. MEC's must subsequently identify and publish a list of these schools in their provinces. Schools in each province are therefore classified into five groups from the most poor to the least poor. For example Quintile 1 is a group of schools in each province catering for the poorest 20% of schools. Quintile 2 caters for the next poorest 20% of schools while Quintile 5 schools represent the least poor. Schools receive money from government according to Quintiles. Quintile 1 schools receive the highest allocation per learner, while Quintile 5 receives the lowest. The reason for selecting quintile 1 schools was to find out how teachers at quintile 1 schools implement CAPS policies when most of them do not have science apparatus in teaching Natural Science.

1.6 ETHICAL CONSIDERATIONS

Permission to conduct the study was obtained from the Department of Basic Education in KwaZulu-Natal to allow the researcher to investigate the implementation of CAPS

in high schools. Informed consent was obtained from all the participants. Participants were assured that there would be no intrusion or disruption of their lives. Respect for participants' values, interests and lifestyle was maintained. There was no coercion, deception or harm to their lives. Participants were informed that they could withdraw from the study at any time that they wished, without any repercussions. Ethical measures such as voluntary participation, confidentiality and anonymity were upheld as per Creswell's (2014) recommendation.

1.7 SUMMARY

This chapter has provided a synopsis of the curriculum transformation in South Africa from the apartheid era of fragmented system to a democratic era of a single curriculum system across the country in public schools. The chapter mainly focused on the background of the study, significance of the study, problem statement, aims and research questions, definition of terms and delimitation of the study. The next chapter focuses on the literature study relating to implementation of CAPS and possible improvements for effective implementation.

1.8 CHAPTER OUTLINE

Chapter 2

This chapter provides literature review which also covers theoretical background to this study. It also entails the exposition of international, national and provincial implementation of curriculums of state and independent schools. The implementation of curriculum at school level is broadly discussed in this section of the study.

Chapter 3

This chapter details the research design and methodology of the study. Procedure for the collection of data, research instruments, the selection of participants, and the plan of organising and analysing data are discussed. Types of methods used during data collection are also discussed.

Chapter 4

A detailed analysis and interpretation of data are discussed in this chapter.

Chapter 5

This chapter presents the aim of the study, discussion of findings and their implications. Lastly, recommendations are presented.

CHAPTER TWO

REVIEW OF LITERATURE

2.1. INTRODUCTION

The previous chapter presented the background of the study. This chapter provides literature review which also covers theoretical background to the study.

2.2. CURRICULUM CHANGE IN OTHER COUNTRIES

According to Waks (2003:386), curriculum means the knowledge and information of school education and the meaning of what is to be taught. Every country may have a reason to change its curriculum. In China, for instance, the reason for changing the curriculum was to allow learners to grasp what educators teach them in the correct way, encourage good behaviour and support new people of the future who are well respected and academically enhanced (Zhu Muju, 2006:23). But in Croatia, education changed due to the increasing knowledge within the society and globally, which brought up other issues within individual requirements for culture, science, technology and socially (Primorac 2007:10-11). In the United States of America (USA), educational change was caused by those dealing with the economy of the country and political heavyweights criticising the problems of uneducated American employees and the bad results within the system of education in the USA. A change of education was demanded to increase the number of employees with good education in order to develop the USA (Waks 2003: 394). The potential for global educational change happens in countries with rich economies, where civil servants, educators and government workers, factory and industry employees, and disadvantaged people are not happy with the changes brought about by the wealthy of the USA (Waks 2003:404). This is not the same as the educational model of Cuba where the change of curriculum does not come from designers of the curriculum but it develops from the demands of the wealthy, forcing school headmasters who were changed by educators during teacher-employer discussions about their responsibilities in teaching learners (Waks 2003:288).

As education is important in knowledge growth and transfer, shaping the young ones for the future and the workplace, it helps to achieve progress in the space of science, which is one of the key issues in nation building (Primorac, 2007:11). That is why the Finnish National Board of Education (2010:2) proposed that a Basic Education Curriculum must have:

"Good norms and purpose; basic intended outcomes; communication plan; monitored teaching time within the country; explanations of working procedure, educational space, and teaching strategies; other teaching techniques, communication procedures, and external ways of communication; other methods of teaching; application of different curriculum thematic concepts; intended outcomes and grouping of work from other Learning Areas annually or per subsections for teaching of combined learners; teaching in selected courses; learner discipline; working together with other stakeholders; resources and other support materials as per curriculum policy; teaching of different learners from different cultures; school-based assessment, examinations and reporting; rules of progression; proof of progression; teaching rules, testing and assessment".

2.3. CURRICULUM CHANGES IN SA

The relationship of curriculum between other countries and South Africa is very important to compare. This is because as a country, we do not want to repeat the same mistakes as other foreign countries like Canada as it has been mentioned above. When the South African government changed from apartheid to democracy, the curriculum also changed, and the Department of Education designed broad goals and general statements which helped in developing programs of instruction (Pinar 2012: 6). When the new government of the Republic of South Africa came into power in 1994, the ANC government formed one education system. The reason was to implement the party's ideology not to improve the quality of education. Then the demand of curriculum change was needed. This scenario is pointed by Khumalo (2014:21-220) in his writings about the change of curriculum in South Africa. I say this because had South Africa investigated the causes of curriculum failure in other countries like China, C2005 would not have been a failure. The changes in curriculum, as pointed by Khumalo (2014), would not have been implemented. In his study, Khumalo pointed out the following changes:

- i. The introduction of National Education Policy Act 27 of 1996;*
- ii. The setting of Norms and Standards of educators;*
- iii. The introduction of South African Schools Act (SASA) 84 of 1996; and*
- iv. The Introduction of the Employment of Educators Act 76 of 1998.*

Despite the above mentioned changes, Khumalo (2014:22-23) mentions that other changes took place at a school level, namely the basic phase for orientation, the initiation or adoption phase, implementation phase and the school phase. This was then followed by the change of policy documents in subjects like Natural Science at grade nine level. During the implementation of curriculum, it was discovered that there were problems about teaching of Natural Science at grade nine (Dessie, 2015: 81). The Minister of Basic Education, Angie Motshega, decided to form a committee to review the curriculum. That committee recommended the introduction of CAPS (DoE 2009, cited in Khumalo 2014:22). This was followed by suggestions of empowering school managers and their school management teams in order to fast-track the changes (DoE 2009, cited by Khumalo 2014). Although the policy changes had been made in teaching Natural Science at grade nine (senior phase), implementation in schools proved to be very difficult.

Khumalo further states that the Minister of Basic Education must be blamed for her failure to transform the education system in SA during her tenure. Neglecting to institutionalize the school phase led him to conclude that she does not understand the dynamics of education, because she recommended curriculum implementation without considering the experience accumulated by educators (Khumalo, 2014:23). He argues that schools require time to prepare for implementation of a whole school approach. It is recommended that the Department of Education engages with school for at least a year prior to the start of the new curriculum. Schools will then have adequate time to establish crucial community partnerships, prepare for and integrate respectful relationships into their school planning cycle (Ollis & Joyce 2016: 9). Learners must have access, ability, interest, and should value learning. The teacher should be focused and monitor the educational process, be dedicated and responsive to learners, and be inspirational. The content must be accurate, timely, stimulating, and pertinent to the learner's current and future needs. The method or process must be inventive, encouraging, interesting, and beneficial and provide tools that can be applied in real life. The environment needs to be accessible, safe, positive, personalised as much as possible, and empowering (Zenda, 2016: 40).

2.3.1. THEORIES FOR CLASSROOM INTERACTION.

Theories for classroom interaction are discussed in this chapter as a result of new curriculum introduced in South Africa. The success and failure of curriculum depends on classroom interaction. The teacher as a curriculum driver must fully understand what she/he needs to deliver in the classroom. If teachers are poorly trained; the curriculum in the classroom will not be properly implemented. Theories play a vital role in the implementation of curriculum as they give historical background about the intended curriculum.

This section discusses the theories that inform and guide this study, i.e. constructivism as an umbrella term; but this study will concentrate on social constructivism. Social theory is about learning which takes place in the classroom (Ollis & Joyce 2016: 12-13). This social constructivism is the theoretical conceptualisation used to explore the educators' understanding of classroom interaction and how it is employed at the selected senior phase classrooms in the province of KwaZulu-Natal.

Social constructivism sees learning as an active process involving others (Ollis & Joyce, 2016: 12-13). Constructivism learning theories have implications for instruction because they emphasise on student-centred, knowledge-centred, assessment-centred and community-centred learning environments. Learning, in the constructivist view, requires the active involvement of learners to construct and build up new knowledge for themselves from what they already know (Dessie, 2015: 23-24). Therefore, constructivism learning theory becomes the basis for Natural Science and Mathematics education. For that reason, constructivism is a dominant and a powerful theoretical perspective in the field of Natural Science education, particularly on the assessment practice today (Makhubele, 2015: 23).

2.3.2 CONSTRUCTIVISM PERSPECTIVE ON THE CLASSROOM INTERACTION.

In view of the fact that this study is about the implementation of CAPS policy in the classroom, the researcher opted to use constructivism as an underpinning theory because it holds the view that people learn by constructing meaning and through interpretative interactions with experiences in the environment. The existing understanding of curricula in action is that it is not a neutral and rational activity, but is socially constructed. In teaching Natural Science using CAPS policy, educators need

to allow learners to socially construct meanings in grade nine classrooms through interaction (Zenda, 2016: 47). Learning takes place as learners discuss and share problems and solutions in groups or pairs, with authentic tasks given within a meaningful context in order to promote individual learning and encourage learners to be engaged in a task. Learning takes place through collaboration, when learners discuss, share problems and solutions about Natural Science (Makhubele, 2015:18).

That is why Irvin (2008:204) argues that in education, the idea of learning as a constructive process is widely accepted. Learners do not passively receive information, but instead actively construct knowledge as they strive to make sense of their world. Constructivism is based on the beliefs of writers such as Piaget, as well as Bruner's thoughts about self-finding learning (Applefield, Huber & Moallem. nd: 5). Husen and Postlethwaite (1989:114) are of the view that nothing can happen without the theory of knowledge, which is part of constructivism, and has two educational principles: cognitive development and learning plus practice of teaching. Another scholar, Von Glasersfeld (1996), cited in Richardson (2007:1), posits that constructivism allows grade nine Natural Science educators to view their learners on how they learn in a way that is congruent with best practice. Tam (1999:1) has a different view of constructivism, seeing it as a radical departure of thought about the nature of knowing. To her, the constructivist perspective describes learning as a change in meaning constructed from experience. She further describes constructivists as people who believe that knowledge and truth are constructed by people and therefore do not exist outside the human mind. In their recommendation, Baker, McGaw and Peterson (2007:1) advise that constructivism needs to be used carefully as it is interconnected with many disciplines. Although there are numerous variations and definitions of post-modernist thought (e.g. radical constructivism, social constructivism, and de-constructivism), of which constructivism is a subset. With regard to educational practice, the theoretical perspective of Jean Piaget has had a significant influence (Mathews, 2003: 51-52). It is clear that one of the common factors in constructivism that run across all these definitions is the idea that development of understanding requires the learner to be actively engaged in meaning-making. In this study, constructivism is used to describe teaching and learning of Natural Science at senior phase.

2.3.3. CONSTRUCTIVISM AS SOCIAL LEARNING THEORY.

The researcher here discusses constructivism as a learning theory. Learning is interpreted in different ways; some believe that learning is a directly observable change in behaviour (Bronack, Riedl & Tashner 2006: 221); others believe it as an internal process where learners either build new or modify existing knowledge. On the other side, Swan (2005:4) is of the opinion that learning theories are called social constructivist because their main concern is with knowledge construction which is through social interactions. She further argues that social constructivist theories are from the work of Vygotsky and Piaget. On top of that, she alluded that Vygotsky's work proves that all learning, results from social interaction, constructed through communication, activity and interaction with others. Moreover, the definition by Drolet (2012:2) reflects that social cognitive theory is a theory that focuses on cognition and the learner's mental involvement as an essential component of social learning. But Social Constructivists view learning as neither solely intrinsic nor purely extrinsic, but rather as a contiguous process that exists each time people wilfully interact with each other in the world around them (Bronack, Riedl & Tashner 2006: 221). At the same time, Risse and Wiener (1999: 775) believe that social constructivism is deeply contested and is subject to construction or deconstruction by scholars in the field.

Since this learning theory involves teachers and learners (State University of New York 2006:7-8) it is an approach that encourages all members of a learning community to present their ideas strongly, while remaining open to the ideas of others. It emphasises the importance of culture and context in understanding what occurs in society. It further constructs knowledge which is based on the understanding of what happens when individuals are engaged in meaningful learning (Kim 2015:2-3). This theory of knowledge deals with general things like politics, ideologies, values, power and the preservation of status, religious beliefs and economic self-interest as well as the relationship between structures (Richardson, 2003; Jackson & Sorensen, 2006; Au, 2015); it also emphasises inter-subjectivity of interactions.

Furthermore, it has been noted by Thomas, Menon, Boruff, Rodriguez and Ahmed (2014) and Belbase (2011) that it is an ongoing process, reproduced by individuals acting on their interpretation and their knowledge. This means that the teacher does not assume his authoritative role in class like a social constructivist teacher, but

instead brings democratic ideals to the class, providing enough opportunities to the learners to learn from their participation in various activities. Educators need to address the content and how much constructivism is embedded in the teaching material that coincides with constructivist pedagogy. This must include the depth and scope of content that allows for constructivist teaching and learning taking place (Blaik-Hourani, 2011: 231). Furthermore, Brey (1997) and Irvin (2008) suggest that learners must bring to the classroom knowledge and thinking that have been proven successful in the past. This knowledge and thought patterns would guide them in replacing old with new thinking, and in this way, learners could be seen to be active meaning-makers. This can only happen if educators create more opportunities to meet and work as a group on their teaching practice, gain insight and understand what is needed to teach (Ball, 1993; Irvin, 2008 & Knol 2011). Researchers like Chompalov and Popov (2014:63) discovered that there are scholars from the Natural Sciences who often dismiss any suggestion that their research behaviour influences the objects they are studying and produce results that would not otherwise appear. Nonetheless, these critics accept the choice of problems to study, the rate of scientific advance, and the everyday making of science which is indeed influenced by the social context; however, they emphasise the content as constituting the nature of science, which is undoubtedly constrained by nature. Their position is that the ontological basis exerts much stronger influence than the epistemological and methodological choices made by scientists. The position of Natural Science scholars is also opposed by Wise and Quealy (2006: 902). They cited that individual learning is the responsibility of the learner and there is too little room for an explicit educational design in terms of curriculum and learning design. Yang and Wilson (2006:366) recommend classroom reading practices which are based on both top-down and bottom-up strategies because they scaffold learners' developmental reading skills, and Huang (2009: 179) added that educators must encourage learners to create their own meaning from text, rather than imposing their interpretation of the meaning upon learners. However, if learners are not encouraged to go beyond these strategies they may learn reading habits which are over-focused on decoding, to the detriment of other reading resources. The nature of knowledge and learning which was used in C2005 was based on social constructivism. In social constructivism:

The learner is not viewed as a passive receiver of knowledge, into which the facilitator must “pour” knowledge, but conceptual knowledge cannot be transferred as an intact from one person to another, the learner must be viewed as an active participant who constructs knowledge. The learner comes to the learning situation with his own existing knowledge; new ideas are understood and interpreted in the light of the learner's existing knowledge, built up out of his previous experience. Learning from this perspective entails that the learner must re-organise and re-structure the present knowledge structures, and this can only be done by the learner himself (Olivier 1999:124).

Olivier (1999:124) elaborates further by stating that:

learning is a social process, learners learn from each other through discussion, communication and sharing of ideas, by actively comparing different ideas, reflecting on their own thinking and trying to understand other people's thinking by negotiating a shared meaning.

Lastly, learning occurs at the individual level and is a product of knowledge creation through collaboration, whereas knowledge is co-created in the environment (Churcher, Downs & Tewksbury, 2014: 35). It is manifested in the intellectual aptitude, cognitive strategies, motor skills and dispositions that people develop while working toward a goal within a community of others, but learning occurs first on the social level and next on the individual one (Bronack *et al.* 2006: 221).

2.4 EDUCATIONAL IMPROVEMENTS IN SA

The improvement of education in our country depends on how curriculum is implemented in classrooms. This can only be done by teachers, during the teaching and learning process in the classrooms. The classroom activities and methods used by teachers in the classrooms are the key solutions to the improvements of South African education system. It is quite debatable to say that there have been improvements in our education system. Scholars have different views about the

improvements in the education of SA. Educational scholars such as, Jansen and Taylor (2003) believe that the new South African regime has achieved a number of notable successes in the post-1994 period. Msila (2007:154-158) mentions few improvements in the education system of SA:

- i. *The creation of a single National DoE out of 19 racially, ethnically and regionally divided 'departments of education', which was a very significant accomplishment in the early years.*
- ii. *The schools are now non-discriminatory environments where access can be gained on the basis of criteria other than race or religion – also a very significant achievement of the new government.*
- iii. *The delivery of certain basic services, such as the supply of electricity, water, toilets, computers, and telephones, has clearly improved since inception of the democratic government.*
- iv. *School governing bodies (SGBs) have been entrusted with powers by the SASA, where the governing bodies determine the schools' policies.*
- v. *Governing bodies represent one recognised structure falling under the Ministry of Education.*
- vi. *Their powers ensure that there is cooperation among various stakeholders, i.e. parents, learners and educators.*
- vii. *Nation-building, non-racism, democracy and humanism are some of the values that the new curriculum is attempting to instil.*
- viii. *Education in SA continues to be a vehicle for social and political transformation.*

According to Kumar (2010: 7) the decision taken by the De Klerk Government to invite banned political parties like the African National Congress to the negotiating table and the opening of prison gates to allow people like Nelson Mandela to lead democratic government was welcomed by international community, and is one of the things that contributed to the improvement of our education system. This led to the introduction of projects such as the National Education Policy Initiative and National Education Coordinating Committee. Lots of changes in education system were brought during the tenure of President Mandela's Government. The School Feeding Scheme was introduced with a budget of R472.8 million, which was later increased to R800 million. However, corruption which has affected the whole of SA started during this period,

principals and SGB members corrupted the feeding schemes (Kumar, 2010:10). This kind of corruption contributed to the poor implementation of curriculum. The money that supposed to buy educational resources was misused by principals and SGB members.

Public spending on education system changed in 1994. Between 1994 and 1999, the emphasis was on instituting de-racialised budgeting processes, reducing the overall budget and cutting costs (Chisholm 2004: 6-7). As a percentage of Gross Domestic Product, SA spent 7.3% on education in 1991/2. Between 2001 and 2004, it spent an average of 5.5%. Despite major wage increases for educators in 1996, there was a decline in public school budgets between 1997 and 2001 at an annual rate of 1.5%.

The link between improving equity and quality has been central to departmental initiatives since 1994. Immediately after 1994, the strategy was on the one hand to shift part of the burden for costs onto parents through school fees, and on the other the redeployment of educators from better-resourced schools mainly white urban schools to poorer-resourced schools mainly black and rural schools. This was a result of the introduction of a policy of rationalisation and redeployment of educators based on Resolution 3 of the Education Labour Relations Council. It anticipated phasing in a learner: education ratio of 40:1 in all primary schools and 35:1 in all secondary schools (Chisholm, 2004:6-7). For Graven (nd: 4), the changes in Mathematics curriculum documentation, which was replaced by the broader Learning Area Mathematical Literacy, Mathematics and Mathematical Sciences, is an improvement in the curriculum.

2.5 EDUCATIONAL CHALLENGES

Even though there are improvements in our education system, there are still challenges that need to be researched. In any curriculum change, there would be challenges and they must be addressed properly. It is rare that a scholar in education can ignore the main challenges that countries addressed in comprehensive cases of curriculum change and improvement, as well as in curriculum processes and issues of curriculum management (Crisan, 2006:1). Mahomed (2004:1-2) lists the challenges

that face curriculum transformation. They are teacher development and support, managing scheduling challenges of RNCS implementation, monitoring of the implementation, assessment, provision of learning support materials, getting the desired results and GET Certificates. Majumdar (2009:5-12) proposed that challenges such as integrating sustainable development, understanding the meaning and scope of educational sustainable development; defining sustainable development skills in terms of knowledge, skills and attitudes; application of functional models for integrating sustainable development, the relationship of generic to specific Learning Outcomes in sustainable development; integration of sustainable development in subject domain; and the imparting of educational sustainable development with innovative pedagogy must be discussed and resolved by education stakeholders.

Challenges on curriculum changes related to attitudes and skills are more difficult to define compared to disciplinary knowledge-based materials which identify measurable outcomes (Wormley, 2004: 329). There are also difficulties in assessing success of curriculum renewal, particularly with respect to changes that influence attitudes and skills. There is another warning from Tang (2010: 55-56) about the gaps between the written curriculum, the planned curriculum, the learned curriculum and both the short- and long-term consequences of students' learning. He argues that many educators are working in challenging circumstances instead of showing the remarkable creativity which is needed in meeting the demands of supporting the learning of learners. Modisaotsile (2012: 3) believes that the method used by the Department of Basic Education of one teacher and 25 to 35 learners to educate, is a very difficult task to accomplish. The ratio of learners to educators is too high, and it is difficult to acknowledge some learners. Ferguson (2005: 3) added that there are challenges in the introduction of new activities in ways that inspire buy-in; the balancing of principal control with teacher autonomy; committing to ambitious goals; maintenance of industriousness in pursuit of the goals; and the effectiveness of harvesting and sustaining the gains. The SA Government has failed to inject massive funds into the educational sector in fulfilment of the reform agenda on education (Udoka, 2010: 121). It is important to understand different cultures, attitudes and behaviours in order to develop mutual understanding between groups, which can be stimulated by developing a common understanding of the key drivers for change, both internal and external (Green, 2013: 13). Similarly, in Zimbabwe, the development of a peace-time

education curriculum took a long time to be completed, because there were a lot of steps to be followed in the process (Rukuni, 2013: 12). The steps are situational analysis, goal formation, policy decisions, trial and development, implementation phase, evaluation and follow-up. Further than that, the introduction of peace-time education in the school curriculum presented a challenge in material resources. There was a need for more abundant resources, such as relevant textbooks to be used in the teaching and learning of the subjects in schools. This also led to a need for more financial resources to purchase teaching and learning materials.

According to Cruz (nd: 2-3), senior phase educators are faced with difficult challenges in achieving professional requirements. Besides the chalkboard method expected of them, educators are also required to work as experts in curriculum, as fault finders, nurses, family motivators, adult basic education and training practitioners, subject directors, youth advisors, learner guiders, psychologists, caregivers, and lots of other things. In such environments schools and novice educators are faced with the challenge of defining what to teach, when to teach it, and why it is important to teach it.

The challenges are indeed daunting, but it is important for educators as professionals to be able to assure the public that they know what children should know and when they should know it. Both senior and novice educators must take ownership of the challenges and provide the leadership to make it happen. The teaching profession is not for the faint of heart or the passive individual. Teachers are active, demanding, and complex professionals. Novice educators are the first line of defence in the teaching and learning of young children. The impact teachers have today will be felt tomorrow and for generations to come, hence our legacy will be revealed (Cruz nd: 2-3).

Chukwuneke and Chikwenze (2012:85) relate these challenges to the introduction of the reformed curriculum of Nigeria, the unavailability of equipment for typical work, overcrowded classrooms, lack of adequate infrastructure for both learners and educators, inadequate instructional materials, educators not trained for the reform curriculum, educators mostly being single science specialists, poor knowledge of how to use most of the materials/equipments by the educators, inadequate time allocated for the subject, inadequate numbers of educators and poor methods of instruction.

Capper (2003: 63) added to the above comments, and emphasised that there are several important factors in education and economic as well as community expectations which can be achieved by using different technology in the educational sphere. However, these expectations cannot be addressed without making sure that the wider conditions which strengthen the use of technology, as well as the changing of technology into a formal, well-planned curriculum and high expectations of assessment are present. In conclusion, Caldwell (2001:14) adds that:

"One of the goals of education is to assist students in developing personal and social responsibility. Education must search for ways to work with students to improve the socialization process. Students with behavioural challenges need assistance in developing responsible behaviour for getting along with others, for developing positive relationships, for working with others, and for solving conflicts".

2.6 INVOLVEMENT OF STAKEHOLDERS

The challenges we faced during the implementation of curriculum, required stakeholders to be involved. This is the mistake that was made by the government during the implementation of CAPS in our schools. Stakeholders like Natural Science teachers were not consulted when policies were drafted by DBE. Stakeholders can be defined in many ways. It depends on the type of the institution the researcher chooses to write about. A stakeholder (internal or external) is an individual or group with an interest in the success of an organisation in fulfilling its mission, delivering intended results and maintaining the viability of its products, services and outcomes over time. Internal stakeholders are those who work within the school system on a daily basis and who largely control what goes on there. They include school staff, district staff and, to some extent, school boards. External stakeholders are those outside the school who are involved in the day-to-day work of the schools and who have a strong interest in school outcomes, but do not directly determine what goes into producing those outcomes (United States DoE, 2009:4-5). These stakeholders are parents, non-governmental organisations and other parties interested in education.

As indicated at the Poland Conference (OECD 2012:1), the key element of successful policy reform implementation is ensuring that local stakeholders such as policy-makers, school leaders, educators and parents have sufficient capacity to meet this challenge. In particular, they need adequate knowledge of educational policy goals and of the consequences that implementing these policy goals will have for their respective environments. They also need the tools to implement them as planned. Further views from the Poland Conference are that local policy-makers often need to serve as mediators between other local level actors as well as those at regional and central levels. One of their main tasks is to provide upper levels of government with knowledge of what is actually happening at local level, and what the needs and challenges of day-to-day education. In order to do this, they use different sources of knowledge, including the experiences of local actors in defining and solving problems in schools and classrooms. It is important to facilitate and strengthen the ways in which local educational policy-makers gather and transmit this feedback and knowledge to other levels of government (OECD, 2012: 3). The next sub-sections deal with the roles of various stakeholders in our education system.

2.6.1 Parents

While it should be appreciated that most members of the community may have the least training and education (Mufanechiya, 2015: 30), they can make significant contribution to curriculum implementation in many varied ways. In this context ‘parent’ has the same meaning as the definition in Section 48 of the SASA of 1996. To be a parent of a child, one needs to have a learner which is registered at that institution, in this case, a school. A parent can be a biological father/mother or guardian of the child. Shiluvane (2001: 39-40) explains the parent of a learner at a school as follows:

- i. *The parent or guardian of a learner;*
- ii. *The person legally entitled to custody of a learner;*
- iii. *The person who usually has the care and control of the learner; and*
- iv. *Any adult in the community can be regarded as a parent.*

Different scholars explain why parents should be involved in their children’s education. The Department of Basic Education (2013: 2) states that parents should be well informed about what happens in the school, and receive regular reports about how

well their children perform against clear standards that are shared by all schools. Parents know that if something is not happening as it should in the school, they are obliged to take steps to deal with the problems. Parents' involvement encourages and improves basic learning and teaching, resulting in excellent outcomes. Furthermore, parents nurture learners' talents and guide them to reach their potential and encourage and ensure that learners study at home and assist them with their school work (Zenda, 2016: 55). King (2008: 5) says parents and educators need to work together as partners in order to determine the most appropriate education for the child, for example when a child is in need of special education services. For parents to be effective partners in this situation, parents must know the special education process. Working together to solve issues like the ratio of educators to learners in schools is needed. The success of any attempt to involve the communities in curriculum implementation heavily depends on the attitudes and perceptions of both the teachers and the community members (Mufanechiya, 2015: 31). The one simple thing that parents can do to assist in the formal education of their children is to take an interest in all aspects of their children's school activities: academic projects, extracurricular activities and relationships. This means helping learners with their homework and knowing what they are doing in class. Parents have a fundamental responsibility to ensure that their children are at school and their homework is done regularly. Unfortunately, many parents have never attended school themselves, and so do not know how to read, write and count properly. Nevertheless, parents must participate in the schooling of their children, in a sustainable way, in advocacy decision making and oversight roles. This lessens the problems of teaching and learning of CAPS in the classroom (Modisaotsile, 2012: 3).

As parents want the type of education which makes their children not only employable in a highly competitive market, but also able to succeed in whatever endeavour they are engaged in; Dlamini (2004: 4) suggests that parents therefore play a pivotal and supportive role to the learners and the Department of Basic Education. Children whose parents show little or no interest usually struggle at school. Parents who are well informed on policies and resource allocation in the education sector exert considerable influence and contribute solutions to the challenges in the education system. Good families have the power to take command and work towards the well-being of their children. Education must not only be valued by the community, but must be protected

and preserved to ensure a better future for all. This is the responsibility of all community role-players and stakeholders, as well as educational institutions (Modisaotsile, 2012: 3). Parents who play an active role in the homework and study programmes of their children usually contribute to their good performance at school (Mestry & Grobler, 2007: 176).

2.6.2 School Governing Bodies

In the past, school governance in SA was characterised by a top-down approach. Educators, learners, parents and communities were excluded from making important decisions about schools and education (Modisaotsile, 2012: 3). Principals and inspectors were the main decision-makers for schools. It can be argued that the transformation and reform of the education landscape in SA has influenced all parties' involvement. The School Governing Body (SGB) is the 'governance' of the school, established in terms of the SASA (Act No. 84 of 1996). It is mandated to set policies and rules that govern the school, and to monitor implementation of the rules. SGBs must not be involved in management issues (Dlamini, 2004: 5). Good working relationship between the SGBs, local leadership and school management is important. Heystek (2010: 100), on the other hand, states that SGBs must have sufficient power to hold accountable not only principals who cannot or do not want to implement their own improvement plans for quality education, but also the provincial officials who are supposed to support the principals.

According to Baffour (2006: 29), parents, guardians and community members are regarded as stakeholders by the Department of Basic Education, and are expected to take initiative not only in the State but also as facilitators and implementers of education in the formal and informal sectors. School committees must be chosen from local residents, and chosen fairly according to the SASA (Act No. 84 of 1996). This is because community members are familiar and knowledgeable about the area where the school is situated. Balfour further points out that the good functioning and proper management of the school reflect the will of the people as to where the school is built and situated, as the community is important.

Furthermore, the SGB is the representative of the learners, parents, teachers and non-teaching staff of the school (Modisaotsile, 2012: 3). The SGBs must ensure that the

school is governed in the best interests of all the stakeholders, and SGB members must always put the best interests of the school before any personal interests. Even though other SGB members lack the necessary financial knowledge and skills, and are placed under tremendous pressure as they are unable to develop solutions to practical problems (Modisaotsile, 2012: 3-4). But in terms of the Schools Act No. 84 of 1996 school governing bodies are mandated to manage the funds of the school (Mestry, 2006: 27). The Act provides guidelines for the SGB and the principal on their roles and responsibilities in managing the finances of the school. However, some members of SGBs and principals either have little knowledge of the SASA or simply interpret it incorrectly, which results in many schools experiencing financial mismanagement.

2.6.3 Government

The interest of government is to control the content of the curriculum and the manner of its delivery. Most governments are concerned with the most efficient way to run national systems of education. There is a natural tendency on the part of governments to centralise educational change. Too much centralised control impedes the implementation of change and innovation, and stifles development and creativity among educators and learners (Kennedy, 1996: 78). The research by (Dlamini, 2004: 5) shows that the significance of factors or problems within the education system are caused amongst others by the ongoing changes and amendments to curricula, unsatisfactory teacher training, inadequate support for educators, teaching time compared to other activities, and the unavailability of teaching and learning materials such as textbooks. It is the responsibility of the government to support schools in many instances, such as organising conferences and seminars in order to assist school governing bodies with the tasks of performing their duties.

According to the South African Bill of Rights, every child has a right to education, and it is the Government's duty to build enough schools and provide enough educators for everyone to be able to go to school and obtain proper education. In many instances, the South African Government fails to provide facilities such as libraries and laboratory material, as well as crucial learning materials such as books. The shortage of learning materials results in a further decline of standards in our education system. Most

educators prefer not to teach at schools with few or no resources, as it hinders their teaching performance and that of the learners (Modisaotsile, 2012: 4).

In many African countries, most governments invest heavily in education as a proportion of their total budget. They tend to see the educational process as a primary means of producing the sort of skilled workers required to operate in the changing environments, at all levels of the economy. The world is experiencing a period of expansion and change in many public educational systems, and as governments try to implement the sort of educational programmes, the changes of access to education are also increased at all levels (Kennedy, 1996: 77).

2.6.3.1 Government Report and Recommendations

The fundamental goal of the curriculum should be educating learners to be informed, thinking citizens, interpreting the world mathematically, appreciating the elegance and power of mathematical thinking, experiencing mathematics as an enjoyable experience, and using mathematics to inform predictions and decisions about personal and financial priorities (Queensland Studies Authority cited in Smith 2010: 22). But a report compiled by the National DoE (1997) shows that there were many practical problems experienced during the implementation of OBE. Singh (1999), cited in Mbingo (2006: 19-20), recommended that the DoE solve the following problems that are listed in the report of 1998:

- i. *Learning materials, not relevant to learners' own experience.*
- ii. *Not all materials made available in the home language of the learners.*
- iii. *Multi-grade and multilingual classrooms caused classroom management problems.*
- iv. *Group interactions were not effective enough.*
- v. *More time and training is required for assessment and group work.*
- vi. *Problems were experienced with the learner support material; educators were afraid of new methods and therefore needed more training.*
- vii. *Educators needed more training in reporting and recording.*
- viii. *Learner numbers were too large.*
- ix. *Disciplinary problems at schools,*
- x. *Shortage of resource, and*

- xi. *Educators needed more motivation and support.*

2.6.3.2 Solutions offered by Government

As many challenges occurred during the implementation of the curriculum, the National Department of Education (1997) proposed the following solutions:

- i. *In-service training, attitudes of educators, parents, administrators and professional support staff can be changed;*
- ii. *Initiatives need to be used at mainstream educators;*
- iii. *Training to alter attitudes must be linked and interlinked with other processes and developments which include linking training dealing practically with learners with special needs and achieving success.*
- iv. *Educators' attitudes change when they work with such learners and experience success.*
- v. *Training, if linked to an overall resource/support network which has bearing upon the whole school, can be an effective method of bringing about change and progress.*
- vi. *There needs to be flexibility at all levels in the educational system.*
- vii. *Flexibility is required in terms of professional roles, curriculum and teaching methods.*
- viii. *Educators in schools require flexibility in order to develop confidence in their ability to meet special needs.*
- ix. *Flexibility is required so that educators in existing special schools can experience and develop confidence in working within mainstream schools.*
- x. *One-year or one-term teacher exchange schemes can do much to facilitate this and provide a valuable training experience.*
- xi. *The utilisation of existing resources, the training of educators in co-operative learning, and multiple intelligences,*
- xii. *Education and behavioural science experimentation must be separated.*
- xiii. *All psychological testing should be prohibited in the classroom unless the express written consent of parents is given.*
- xiv. *There should be the practice of adopting outcomes that set quantifiable standards in academic skills, and subjects whose accomplishment by students can be verified through objective testing.*

- xv. *There should be a focus on the primary job of schools: public schools cannot be everything for everyone; their purpose is to provide students with a common core of fundamental knowledge and skills.*
- xvi. *There should be increased parental involvement in student performance in schools.*
- xvii. *Too many parents treat schools as glorified day-care centres and take little interest in their child's progress. The recent SASA 1996 makes allowance for parents to get involved in the SGB of their local schools.*
- xviii. *The trend towards intolerance of independent thought must be reversed.*
- xix. *Diversity should be embraced. Educators are not all alike and schools need not all be alike (Mbingo, 2006: 24-25).*

2.6.4 Educators

Educators are placed in schools in order to teach learners. Teachers are viewed as experts; in particular, they are regarded as researchers and reflective practitioners. Intervention research with educators and action research by educators is becoming more prominent in Natural Science education (Krainer, 2014: 4). Krainer discovered that during the educational transition, black schools had educators who possessed a three-year diploma course, compared to previously white colleges, which were offering a four-year diploma course. That move followed a Government decision that university training should provide a better standard of teaching. However, universities have proved unable to produce educators in sufficient numbers, and too few teaching graduates were willing to move to impoverished rural communities (Modisaotsile, 2012: 4-5). Zenda (2016: 56) suggests that effective educators have a positive attitude; develop a pleasant climate in the classroom; have high expectations of what learners can achieve; manage time effectively; use a variety of teaching methods; and use and incorporate learner ideas in order to improve learner performance.

The argument made by Krainer (2014) is that research and policy often seem to focus primarily on educators' weaknesses. For example, often the immediate reaction to bad results in comparative studies is to start professional development initiatives for educators, as if it were only the educators who need to change. Less attention is paid to the efficacy of the support system for schools, to the teacher education system, to educators' general conditions and reputation, etc. Such reactions indirectly blame

educators, whilst at the same time there are unsatisfactory starting-points for reform initiatives. If research and policy do not admit that the whole system (including policy, teacher education and research) needs to change, the phrase “educators are key agents of change” is a threat rather than an indication of their important role (Krainer, 2014: 4). Educators are those at the coalface of provision of education to learners (Dlamini, 2004: 4). Furthermore, if the new curricula (CAPS) could give *laissez faire* to teachers, particularly on planning, organising and carrying out of activities within the classroom situation, poor reading can be alleviated. Teachers who are given free roles but within the confines of the curricula can utilise their individual abilities to promote reading. Teachers are confined to plan, organise and carry out teaching within the prescribed parameters of the CAPS (Makhubele, 2015: 21).

In 2011, during the announcement of Grade 12 results, the Minister of Basic Education Mrs. Angie Motshekga said: “I do not believe that the South African education system is in crisis, but I blame the lack of discipline in our schools”. My opinion is that there is strong evidence suggesting that some poorly resourced schools nevertheless achieve good results because of strong leadership given by principals, and there are educators who come to school punctually, teach when they are expected to teach, and remain sober. Although a disciplined environment has proved to be conducive to good teaching and learning, another teacher behaviour that hinders performance at school is educators’ sexual involvement with learners. Some shocking reports in the newspapers from 1999 to 2012 indicated that sexual harassment of female learners is a serious problem in many schools. Parents, educators and researchers express concern about educators who create an unsafe physical and emotional environment for learners, both girls and boys (Modisaotsile, 2012: 4-5).

2.6.4.1 Teaching

According Shiluvane (2001: 26), teaching is about the planned curriculum that is made up to achieve educational results. From:

The Christianity, teaching is more than art and science, it also a commitment. It is not a commitment to a method or a school, or a profession, but a commitment to a person. It is a person’s affirmative response to God’s selection of and equipping him/her for a particular function in life.

However, teaching is there because there are educators. Educators can be described in many ways. Burgess (2012: 12) describes educators as follows:

- i. *A good teacher has an instinct for good design.*
- ii. *They care how the text on a worksheet is laid out.*
- iii. *They care about the beauty of the empty space on a page.*
- iv. *They care about the movement of students around a room.*
- v. *They will be sensitive to the emotional climate in a learning space.*
- vi. *They can predict how much time should be allowed for certain activities in a lesson.*
- vii. *They will be aware of the aesthetics of a learning space – important factors such as fresh air, uncluttered walls, natural light and the level and type of noise.*
- viii. *They are aware of the various tools available to them in creating a valuable sequence of learning events.*
- ix. *A good teacher will design a learning component, such as a lesson or series of lessons, as a set of learning activities that most effectively deliver a positive learning experience for as many students as possible.*

Burgess's views are supported by the Finnish National Board of Education (2010: 5), which states that each teacher selects the working methods and plans the working approaches in interaction with pupils because they:

- i. *Stimulate a desire to learn;*
- ii. *Take the process and purposeful nature of learning into account;*
- iii. *Take the starting-points and objectives of different subjects and subject modules into account;*
- iv. *Motivate the pupils to work purposefully;*
- v. *Further the formation of an organised knowledge structure, the learning of skills, and practice in those skills;*
- vi. *Develop skills for acquiring, applying, and evaluating information;*
- vii. *Support learning that occurs through interaction among the pupils;*
- viii. *Promote social flexibility, an ability to function in constructive cooperation, and the assumption of responsibility for others;*

- ix. *Develop capabilities for taking responsibility for one's own learning, for evaluating that learning, and for seeking feedback for purposes of reflecting on one's own actions;*
- x. *Assist the pupils in becoming conscious of their learning and their opportunities for affecting that learning; and*
- xi. *Develop the pupils' learning strategies and skills for applying them in new situations.*

According to Burgess (2012: 12-13), if we accept that the traditional model of a teacher in front of a class is less and less relevant, then we accept the following:

"That the teacher, as broadcaster of knowledge and determiner of acceptable experiences, does not meet the educational needs of a learner in this globalised, digitised and rapidly changing world.

The educator has many roles to play as educator, a facilitator, a co-learner and a mentor".

During the implementation of OBE, teaching was coupled with problems being experienced by educators. Educators voiced out their concerns, some of which were, according to Madden (1997) cited by Mbingo (2006: 17-18), as follows:

- i. *OBE says an educator's success will be measured by learner outcomes; educators have a problem with this.*
- ii. *Educators feel that the new curriculum is a big change, and it might have serious consequences for their careers.*
- iii. *Educators find that they do not have enough books for learners to do their own research.*
- iv. *Some educators are suggesting that OBE is simply a way of getting rid of educators.*
- v. *Educators are talking OBE language but implement the old system in their classrooms.*
- vi. *During a number of workshops educators were not really sure about the ideas being conveyed, but were too nervous to ask questions.*
- vii. *Learners often do not take group work seriously.*

- viii. *School periods are simply too short for learner-centred activities.*
- ix. *C2005 promised to increase the workload of educators, thus resistance was provoked.*
- x. *Workshops were rather too skeletal, conducted only for two to three days.*
- xi. *Educators complain about the new vocabulary in OBE, which requires time for educators to become acquainted with it.*
- xii. *Charts to make drawings and diagrams are very expensive.*
- xiii. *Educators meet weekly to plan and discuss problems and activities around their implementation, but no-one has the skills to plan or assess the work of learners better.*
- xiv. *The Sowetan newspaper in November 2004 pointed out the following problems experienced by educators during OBE implementation:*
- xv. *The system (OBE) did away with the teaching of vowels or consonants for children and instead kids were to be taught sentences from a word go: "How do you make a child construct a sentence when that child does not even know what 'a, e, i, o, u' is?"*
- xvi. *We [educators] were taken on crash courses to learn this system and kids suffered while we were away.*
- xvii. *We started to use that system with no back-up.*
- xviii. *Those 12 hours we spent in a week attending the courses was for the year, but there was a follow-up to see if educators were coping.*
- xix. *In no time, the "Breakthrough-system" was dumped and was replaced by the "Threshold system", which was to be used for the first three months of the year for every child.*
- xx. *Those children who had been to crèches were bored, because it was mostly stuff they had done already.*
- xxi. *There was no alternative to this [boring stuff] that the teacher could provide. All upgrades and changes of OBE came with their own demands and none of them had anything to do with helping the educators cope. We were just expected to conform and attend the course and get on with it – nobody cared.*
- xxii. *We were being bombarded with different work material from all the publishers you could think of.*
- xxiii. *Each Minister of Education came with his own published material and different schools were issued with different books to use.*

- xxiv. *There is a lot of glaring confusion with C2005; we are being confused with these big words and this system does not work with kids from the township.*
- xxv. *Homework is too demanding. It is difficult to get the kid to bring a magazine from home that has different types of furniture, for example. To ask them [kids] to access the internet for homework or an assignment is an insult. The curriculum has no reading material, our children cannot even read.*
- xxvi. *There is no remedial training for educators. We are not consulted and we are sent consultants who have no idea on how things work in the real world. Our children's parents are not involved in their [kids'] education. They still have the old mentality that it is the teacher's job. The children themselves do not have real zeal to do things.*
- xxvii. *The socio-economic situation also does not help; the children come to school being hungry (Mbingo, 2006: 18-19).*

Other problems pointed by Abdo and Semela (2010:80-82) are the nature of teaching tasks (i.e. the amount of school subjects taught, the number of students in class, time constraints during planning, and the weekly teaching load) being cited as major factors influencing much of what educators do in their classrooms. This links to educators being required to teach subjects they do not know and results in spending more time for class preparations, or teaching very large classes. It was recommended that instructional designers and researchers need to take the educators' perspectives into consideration when integrating instructional subjects in schools.

In a changing learning environment, Burgess (2012: 13) believes that educators must become learners and collaborators, embracing and managing all modes of learning. They must identify and provide vibrant learning opportunities in:

- i. *Situations where the classroom is being flipped and students are learning via presentations on their smart phones that are linked to quick response (QR) codes;*
- ii. *Learning environments where educators are communicating with students via Facebook and class blogs, which allow students to share ideas and present their learning to a global audience;*

- iii. *The Twitter sphere, which encourages brevity in their students' communications, while others use an online pin board for organising links and notes instead of conventional referencing methodologies;*
- iv. *Situations where the word homework is an anachronism, because learning can occur throughout the day and in a variety of places; and subjects that allows learners to develop their intrinsic motivation by learning in their preferred learning mode with content of their choice.*

2.6.5 Learners

For any learning to take place at school, learners must be part of it. The implementation of the curriculum is successful if the relationship of the learner and the educator is mutual. It encourages learners to take responsibility for their own improvement, and is the route to excellence in Natural Sciences. Learners should be motivated by a desire to succeed, to explore, to develop and to improve, not by fear of failure (Department of Basic Education, 2011: 142). The Department of Basic Education (2011: 9), also stipulates that application exercises including problem-solving exercises should be done on all cognitive levels in all knowledge areas and on all scientific concepts. Sometimes learners tend to involve themselves in bad things which make them to repeat classes. One of the major causes of class repetition at school is substance abuse. Drugs are easily obtainable by learners and their use is prevalent even at primary school level. The substance most often abused by learners is alcohol, followed by cigarettes and marijuana. Alcohol and inhalants are actually the most brain-damaging drugs, as they literally destroy neurons. They do this by altering the level of certain neurotransmitters in the synapse, the space between neurons. Another cause of decline in schoolwork has been identified as teenage pregnancy. Teenage pregnancy can have a negative impact on young mothers and their children by placing limits on the mother's educational achievement and economic stability, predisposing her to single parenthood, marital failure and financial strain in the future. Pregnant learners may also experience difficulty in studying because of pregnancy-related illnesses. Sometimes learners find it hard to balance being a mother and a learner, as more time may be spent with the baby than on schoolwork (Modisaotsile, 2012: 5).

Rossouw (2003: 414) adds that the most prominent factor influencing the learning environment in South African schools is the conduct of learners. He mentions ill-disciplined behaviour which can cancel out all well-intended efforts to restore or create a culture of learning. He points out that students who misbehave tend to perform poorly in school and are often absent from school. Furthermore, discipline at school is correlated with student absenteeism. Learner safety, security and success in education are often adversely affected by disruptive behaviour or other forms of misconduct by fellow learners.

Due to the above, educators tend to punish learners with suspension, detention and expulsion, or the deliberate infliction of unpleasantness on learners judged to have done wrong may be very tempting to educators. It is very important for educators to avoid making learners feel bad in response to their own bad behaviour – punishment does not teach a learner anything other than that it is alright to hurt others. Instead educators should strive to discipline their learners in order to help them better themselves and their situations. Properly disciplined learners will grow to be happy, healthy and productive members of not just the family, but society as well (Maphosa & Mammen, 2011: 143).

In criticising corporal punishment, Morrell (2001: 292) contends that while this practice has effectively disappeared from middle-class, formerly white schools, it is still relatively common in township schools. He assumes that reasons for the persistent and illegal use of corporal punishment include the absence of alternatives, the legacy of authoritarian education practices and the belief that corporal punishment is necessary for orderly education to take place. For him, a neglected explanation is that corporal punishment persists because parents use it in their homes and support its use in school. This results in tension between the prohibition of corporal punishment in schools and the increase in parent involvement in the affairs of schools.

Another problem mentioned by Probyn (2005: 1857) is that of language. For many township and rural learners the oral language of the school and classroom beyond the first three grades is frequently their home language, whereas the language of reading and writing and assessment at school is English. Bridging this gap for teaching and learning is not easy for children and educators to achieve. The majority of South African pupils cannot communicate their scientific conclusions; in particular, pupils

who study Mathematics and Science in their second language tend to have difficulty articulating their answers to open-ended questions, and apparently had trouble comprehending several of the questions (Dessie, 2015: 28).

The comparisons made by Jukuda (2011: 4) prove that those learners from more privileged home backgrounds, such as White children, are less likely than African children to start school on time and Africans are about twice as likely to matriculate successfully from school as young people from other racial groups but with a similar socio-economic status.

2.6.5.1 Other problems experienced in CAPS

Other problems experienced in CAPS are the following:

- i. *Piles of work are given to learners who have limited time.*
- ii. *Resources are not adequately available for the different groups to conduct class research.*
- iii. *Only learners with literate parents receive meaningful support with homework at home.*
- iv. *Educators tend to set outcomes that are not easy to achieve.*
- v. *Educators are far too strict on rules and do not encourage the learners to think for themselves ((Mbingo, 2006: 22).*

Learners are the investment of the country. They are lifelong investments. Smith (2010: 21-21), as cited in Queensland Studies Authority (2004), defines the lifelong learner as follows:

- i. *A knowledgeable person with deep understanding;*
- ii. *A complex thinker;*
- iii. *A responsive creator;*
- iv. *An active investigator;*
- v. *An effective communicator;*

- vi. *A participant in an interdependent world; and*
- vii. *A reflective and a self-directed learner*

Most of the problems relating to poor performance of learners are escalated by the poor teaching in some of the disadvantaged schools. This is revealed in a study by Mji and Makgato (2006: 260), where one learner said:

"I think it would be better if when they teach Science and Physics that they should show us when they ask about sulphuric acid, I don't know what is sulphuric acid, it will just be an abstract thing, that name, when they tell you that when you mix this and that gives you that, you don't know what is that".

Besides the subject content, the English language is also problematic to rural disadvantaged schools. My suggestion as a researcher is that the DBE must have a policy which stipulates that all newly qualified Science and Mathematics educators must serve a certain period in rural disadvantaged schools.

2.7 CURRICULUM SUPPORT

Once all stakeholders are involved and correctly utilised by DBE, then the provision of adequate learning support materials is essential for the effective running of an education system (Vinjevold & Roberts, 1999: 31). These materials are an integral part of curriculum development and they provide both good teaching and learning. Vinjevold and Roberts came out with basic principles that should underline the development of learning materials. For them, learning support materials should:

- i. *Promote a love of life-long learning;*
- ii. *Promote critical thinking, logical reasoning and problem-solving as essential life skills;*
- iii. *Promote emotional, intellectual, personal, physical, spiritual, moral and social development, gender appropriateness and sensitivity, an integrated approach to learning, and encourage 'hands-on' experiences;*
- iv. *Promote awareness of and respect for the environment and the diverse cultural heritage of society at large;*

- v. *Provide for a continuous progression of opportunities for development, allowing learners opportunities for gradual refinement of perception;*
- vi. *Take cognizance of individual differences and promote learner-paced learning; and*
- vii. *Link the content/concepts/knowledge/understanding to skills and to values/dispositions/attitudes/norms.*

Given challenges about educators' knowledge of inquiry, various techniques to promote learning such as coaching, or specific instructional strategies such as prediction-observation-explanation, management of the classroom, understanding of non-trivial content, new technologies to represent content and support inquiry, and non-traditional assessment, one way to support teacher learning is through curriculum materials designed for educators. These include textbooks, teacher guides and technology-based materials supplied by publishers or researchers, as long as they are traditionally designed with child learning in mind. Educative curriculum materials cannot replace other professional development opportunities, but they do have a unique role. Educators can use curriculum materials over an extended period of time in the context of their classrooms. In addition, curriculum materials are used in all schools or by all educators. These curriculum materials can be used to address reform issues (Schneider, Krajcik & Marx, 2000: 55).

According to Bergeson (2008: 1), the method of choosing and accepting the relevant support materials for all subjects needs to be properly arranged and used in each district to guarantee the best teaching aid for learners. Bergeson (2008: 2) further states that goals for instructional materials selection guidance must:

- i. *Guide schools on how to choose resources;*
- ii. *Explain the process of using resources in all schools;*
- iii. *Show policies for choosing resources;*
- iv. *Describe good methods of choosing resources; and*
- v. *Attach documents showing educators how to choose resources.*

According to Kobola (2007: 51), educational institutions must get money from the State, NGOs or parents so that the introduction of the curriculum is good. This must be done by Government, leading by example in supplying support materials in all

schools in order to help learners to achieve good education. Support from other sponsors cannot be taken as guaranteed. Equally, learners are often far too poor to be able to contribute to buying educational resources for their learning. If schools are financially supported these funds must be used for purchasing learning and teaching support materials, organising experts to facilitate workshops at school level, transport to meetings and workshops, building classrooms, libraries to encourage reading and research work, and laboratories.

Lastly, educators themselves are the key support materials. Each educator is responsible for taking the teaching group and the different abilities and needs of each of its pupils into account in instruction. Cooperation with parents and guardians, other educators and staff members and different experts contributes to success here. The educator's task is to guide the group to function in such a way that its internal interaction promotes learning. The educator guides pupils to recognise their own resources, learning-related strengths and development challenges. Special attention must be focused on pupils' learning abilities and their opportunity to assume responsibility for their own learning, setting objectives for it and its planning, implementation and assessment. Pupils' self-esteem, study motivation and learning-to-learn skills are consolidated in all learning situations and subjects. Teaching work also involves tasks relating to guidance, counselling and pupil welfare. Assessing support needs and offering the necessary support form an integral part of a teacher's work and all teaching situations. Support is constructed in cooperation between educators and other experts, where required, and in interaction with pupils and their parents or guardians (Finnish National Board of Education, 2010: 9).

2.8 IMPLEMENTATION OF CAPS POLICIES IN THE CLASSROOM

Support materials given to stakeholders by DBE must be used to implement curriculum effectively in the classroom. The researcher believes that classroom management is one of the essential competences for an efficient teacher among a set of competences that are determined according to agreed-upon behaviour and an acceptable standard. Al-Momani, Allouh and Al-homran (2012: 138) mention a number of attitudes in classroom management, learning management and classroom system, which are focused on the importance of considering the learner and increasing his/her achievement. Therefore, efficient educators become the educators who own the

effectiveness of classroom learning management and classroom organisation that is seen in the performance of learners (Al-Momani *et al.*, 2012: 139).

Implementing the curriculum is the most crucial and sometimes the most difficult phase of the curriculum development process. Those responsible for implementing a curriculum in the classroom often have comments and concerns such as:

- i. *Educators are already overloaded – how are they going to implement the new ideas?*
- ii. *Parents and education officers are only interested in a high pass rate in examinations – how are schools to incorporate suggested changes?*

These are real concerns and are made worse when persons implementing the curriculum are not clear what is expected of them. How often have we heard people say “The plan was good but implementation was poor”? On the other hand, if a curriculum plan is not implemented and remains on the shelf, then all efforts in planning will be a sheer waste. A curriculum must be delivered and that means it must be implemented in the classroom if it is to make an impact on child's learning.

Good plans reaching the classroom are not properly implemented because of a lack of planning and preparation. In some curriculum development projects, implementation is not given due consideration, not realising that innovations need careful planning and monitoring. We hear of educators not being properly trained yet are required to implement changes in the classroom within a short period of time (*Sunday Star*, 2005: 2-3).

Educators play a pivotal role in the classroom implementation of a new curriculum and in its expansion to general classroom use (Press, 2009: 1). Educators must understand task or activity analysis, be able to reduce the curriculum to its subcomponents and determine where the access to these subcomponents is breaking down. To get further and better implementation across a broader spectrum, curriculum developers should realise that curriculum must be brought to the teacher first (Press, 2009: 1). One of the reasons classroom educators point to for not implementing content area reading strategies in their curriculum is that the idea of addressing reading challenges does not fit in a secondary classroom where content is king

(Krepps, nd: 5). Krepps asserts that content area educators often do not see a connection between literacy skills and content information, as these skills appear to be inconsistent with the traditional goals of the secondary curriculum. The view is that many content area educators struggle to buy into the teaching of reading strategies. In addition to the above, content area educators frequently reference limited teaching time as a reason for avoiding the use of literacy strategies (Krepps, nd: 5).

Sometime educators get confused and become unsure about what is expected of them, particularly when the 'top-down' approach is taken. Educators also feel distanced from the development and overall philosophical approach to a new curriculum when they have not been involved in this process from the outset, and feel that they have little power to influence the official discourses (Barton, Garvis & Ryan, 2014: 168). Educators' failure to implement policy as policy-makers may signal their uncertainty about outcomes and their assessment that new practices are not as good as the previous ones. Educators' will to implement the imposed change declines over time, because the change was not supported by their education officials in ways that impacted them. Although educators were focusing on immediate classroom priorities that influenced daily lessons and put their emphasis on student learning, their willingness to implement language policies was influenced by the social and personal dimensions of classroom teaching and by their goals and beliefs. In other words, changes were mitigated by the local contextual factors (Wang, 2008: 2).

This is supported by Han and Weiss (2005: 669) who state that educators' initial implementation efforts may be influenced by their perceptions and beliefs about a new programme prior to implementation. More specifically, educators' judgments of the acceptability of an intervention programme influence their interest and willingness to implement a programme significantly and the degree to which they implement the programme with fidelity. Bruinsma (2011: 4) adds that the proper implementation of assistive technology in the classroom requires training for the student and educators. If educators are not trained properly then assistive technology may not be implemented properly, or may not be implemented at all. Froniear (2010: 11) concurs that efforts to balance the literacy framework should include "elements of community, authenticity, integration, optimism, modelling, and student control and connectedness". For successful implementation, educators must have long and

uninterrupted literacy blocks each day, immerse students in a positive and cooperative environment, have high expectations, and integrate literacy aspects (reading and writing) across all content areas. I therefore recommend a reading to the learner first, then reading with the learner, and finally reading being done by the learner.

2.9 MONITORING AND EVALUATION OF CAPS POLICIES

Once the curriculum is implemented in the classroom, Teachers and education officials must make ensure that the curriculum being offered in the schools is appropriate and responsive to the needs of the community, since its intention is to develop the minds and performance of learners. For the curriculum to be effective, it needs to be monitored constantly. Generally, the curriculum developer should be able to monitor and evaluate the curriculum periodically, to check on the progress being made by those people delivering the curriculum, and to offer professional guidance to the educators in order to make their curriculum delivery more effective. Either formative or summative evaluations of the curriculum are required (Commonwealth of Learning and The Southern African Development Community Ministries of Education, 2000: 3).

Monitoring is the systematic collection and analysis of information as the project progresses, which is aimed at improving the efficiency and effectiveness of a project or organisation. It is based on targets set and activities planned during the planning phases of work, which helps to keep the work on track and can let management know when things are going wrong. If done properly, it is an invaluable tool for good management, and provides a useful base for evaluation. It enables you to determine whether the resources you have available are sufficient and are being well used, whether the capacity you have is sufficient and appropriate, and whether you are doing what you planned to do (Shapiro, nd: 3).

Evaluation is the comparison of actual project impacts against the agreed strategic plans. It looks at what you set out to do, what you have accomplished, and how you accomplished it. It can be formative or not formative (Shapiro, nd: 3). Monitoring and evaluation both deal with the learning of learners and concentrate on efficiency, effectiveness and impact (Shapiro, nd: 3):

Efficiency tells you that the input into the work is appropriate in terms of the output.

Effectiveness is a measure of the extent to which the developed programmes or projects achieve the specific objectives set.

Impact tells you whether or not what you did made a difference to the situation you were trying to address.

Hussain, Dogar, Azeem and Shakoor (2011: 265) view curriculum evaluation as the collection of information on which judgement might be made about the worth and effectiveness of a particular programme. That includes making those judgements so that decisions might be made about the future of the programme and whether to retain it as it stands, modify it or throw it out altogether. This includes:

- i. *Planning intention, e.g. which objectives to select,*
- ii. *Planning procedures, e.g. which personnel, methods and material to employ,*
- iii. *Implementing procedure, e.g. whether to continue, modify or abandon a procedural plan, and*
- iv. *Outcomes, e.g. which intentions are realised, to what extent and by whom.*

The main purpose of evaluation is to assess the extent to which the curriculum is achieving the intended objectives. To conduct evaluations effectively you should consider at least three factors (Commonwealth of Learning and The Southern African Development Community Ministries of Education, 2000: 3):

- i. *The design of appropriate evaluation instruments, in the form of checklists, observation schedules or questionnaires;*
- ii. *The degree to which the objectives set by the curriculum are achievable; and*
- iii. *Testing and assessment practices.*

On the other hand, Woods (1988: 8) discovered that individual educators can only engage in a limited range of evaluation activities if left to their own devices; collective evaluation by groups of educators appears to be on the increase, in terms of both logistics and desires. He emphasised the effectiveness of cooperative evaluation – which may be significantly reduced however, unless curriculum developers remain aware that staff require guidance in developing group skills.

Shelley (2009: 2) is of the view that in order to form an opinion on the quality of the curriculum and the progress being made in implementing curriculum policies, school inspectors need to develop structures for monitoring. These will normally be linked to the school development plan priorities so that school inspectors can assess the effectiveness and value of decisions made both on policy and spending on resources. Strategies include:

- i. *Reports from the principal and curriculum co-ordinators on identified areas. There should be a report from the principal at every school visit meeting. This will, as a matter of course, include information on the curriculum.*
- ii. *Visits to the school by a designated inspector to evaluate progress in identified areas.*
- iii. *Annual analysis of test results, which should involve comparisons with previous years, similar schools and pupils' previous attainment (such as baseline scores). It is helpful to analyse results in relation to factors such as ethnicity and gender.*
- iv. *Discussion of reports arising from the visits of advisers. The inspectors and principal, as part of their monitoring of progress in a particular curriculum area, can request such visits.*

Lastly, it is vital for school inspectors to remember that a visit to school is not an inspection: misunderstandings may arise if notebooks are in evidence, particularly in a classroom.

2.10 CONCLUSION

This chapter reviewed literature which is relevant to the study. Literature reveals that curriculum change started in European countries and it escalated in other countries. In most countries the implementation of OBE was unsuccessful. Each country has their own reason for curriculum change; in Cuba, for instance, elites forced change in curriculum for economic reasons, and similarly the elites and politicians in the USA contributed to curriculum change (Waks, 2003: 394).

In SA, the change in curriculum was politically motivated and implemented, but the big mistake was to copy the tried and tested curriculum of overseas countries. The failure

of C2005 followed by the RNCS in 2004 shows that no proper research was done before curriculum design. The main objective was to get rid of the apartheid education system.

This process of change caused confusion among educators at school level. According to Khumalo (2014: 22), the responsibility to make the NCS a success was that of principals, deputy principals, heads of department and post level 1 educators. Since the South African curriculum was politically motivated, I suggest that social constructivism theory is the best to apply in evaluating teaching CAPS at schools. My suggestion is supported by Kim (2015: 2-3), who describes social constructivism as a theory which acknowledges the importance of cultures and dynamics of society.

Although the design of the curriculum was politically motivated, there have been lots of improvements in the education system of SA. Challenges were also noted in all curriculum developments, as described by Green (2013: 13) and Rukuni (2013: 12). In making our curriculum a success, stakeholders must be utilised effectively. Parents, SGBs, educators and learners are the key stakeholders of teaching and learning. Lastly, once the curriculum is implemented, it needs to be monitored and evaluated. This must be done through school visits by departmental officials. Summative and formative evaluation is recommended to test whether curriculum implementation has been a success or a failure.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

This chapter explains how the research was carried out. In this chapter, research design and methodology of the study are detailed. Procedure for the collection of data, research instruments, the selection of participants, and a plan of organising as well as analysing of data are discussed.

The main question of the research is: How Natural Science teachers in Grade 9 class conceptualize and implement the Natural Science curriculum through CAPS? It was guided by the following research questions:

1. How do Grade 9 educators teach Natural Science in their respective schools?
2. What kind of training do Grade 9 Natural Science educators receive during their workshops?
3. What kind of support do Grade 9 Natural Science educators receive from the Department of Basic Education?
4. What knowledge, attitudes and perceptions are held by Senior Phase educators in teaching Natural Science at grade nine?

3.2 RESEARCH DESIGN

3.2.1 Qualitative Research

The study used a qualitative research design to collect data from nine educators about their conceptualisation of CAPS and curriculum implementation of Natural Science subject at grade nine. Qualitative research places emphasis on understanding through closely looking at people's words, actions and records, which is what this study sought to engage in Denzin and Lincoln (2000). Through observing lessons, the researcher discovered patterns of how each of the nine educators provided learners with subject content to learn Natural Science. The patterns came through the actions and words that educators used while teaching. The researcher considered five factors to help him recognize when and how the educators were providing learners with subject content.

These were the educators' approaches to teaching, the questions they asked, the types of tasks they gave, their use of science specific terms and their use of different elements representing periodic table concepts. My task involved listening carefully to words said by both the educators and the learners including observations.

Denzin and Lincoln (2017) define qualitative research as a multi-method in focus, involving an interpretive, naturalistic approach to its subject matter. In line with this view, the researcher examined official curriculum documents to explore the relationship between the intended and enacted grade nine Natural Science through observation of actual lessons at six different schools. The aim was to find out how educators created the opportunities for the learners to learn the expected subject content. This took place in the usual classroom setting following the normal routine of the school day so as to avoid any stresses arising out of singling out some learners for the study. However, on one occasion, one educator offered to reschedule his lesson so that I would not miss observation that day. I also reviewed literature on both the concept of subject content as well as on the teaching and learning of Natural Science.

Creswell (2014) defines qualitative study as an inquiry process of understanding based on distinct methodological traditions of inquiry that explore a social or human problem, where the researcher conducts the study in a natural setting. Qualitative research results are not sweeping generalizations but contextual findings. This process of discovery is basic to the philosophy of underpinning a qualitative approach.

According to Schram (2003), qualitative inquiry is much more difficult to define than it is to identify for it. Researchers are however discernible, such as that it involves the studies used and collection of a variety of empirical materials, case studies, personal experience, introspection, life story interviews, observations, historical material, personal interactions and visual texts that describe routine and problematic moments and meanings in individuals lives.

The researcher used the natural setting of the classroom to conduct his observation of the nine different educators' instructions and the classroom interactions. The researcher then described in detail what he saw, heard and recorded. This is in line with Creswell (2014) who supports the presentation of a detailed view of the topic

derived from a study of individuals in their natural setting. Creswell further argued that if participants are removed from their setting, it leads to contrived findings that are out of context.

Qualitative research questions seek to find out what is going on so they often start with 'how' or a 'what' (Creswell, 2014). In this study the researcher sought to find out what was going on in the selected classrooms by observing educators in action after having looked at what was stated in the official documents. When the researcher visited the classrooms it was not the intention to pass judgment but to learn from the experience so as to develop my own understanding of both teaching and the learning of chemical reactions. The researcher was then in a position to tell the story from the participant's view rather than as an "expert" who passes judgment on participants.

Rozycki (2009) stipulates that qualitative research is characterized by an emphasis on describing, understanding and explaining complex phenomena; on studying, for example, the relationships, patterns and configurations among factors or the context in which activities occur. Consequently, I have described in detail what took place in the classrooms I observed. The researcher reveals through the descriptions and excerpts from the lessons how educators teach Natural Science in their respective classrooms. In chapter four, the researcher describes what he perceived to be reasons behind their practices. The researcher recorded as far as possible what they said in their own words.

In trying to understand how the subject content for Natural Science was provided, the researcher had in mind what was necessary for him to consider the influences of CAPS as defined by the Department of Education, and how educators interpret and implement it. This takes place outside and inside the classroom because the planning is usually done outside classroom. According to Hoepfl (1997), researchers can use qualitative methods to gain new perspectives on things about how much is already known. In this study, I was aware that a lot was already known about the subject content. Hoepfl (1997) further stresses that unlike quantitative researchers who seek causal determination, prediction and generalization of findings, qualitative researchers instead seek illumination, understanding and extrapolation to similar situations.

Another reason for selecting a qualitative approach is that in doing so, research problems tend to be framed as open-ended questions that can support the discovery of new information. The qualitative data is more fully described as phenomenon, which is an important consideration not only from the researcher's perspective, but also from the reader's perspective. Qualitative research puts the researcher in a better position to understand people by looking closely at their experience in the world from their own perspective, using their own words and actions. This provides data that is rich in detail that comes from the participant's experiences of the world.

3.2.2 The Design: Case Study

I selected the case study as the research method because studies are about real-life situations, and involve semi-structured interviews and in-depth observation of cases. In most cases a case study method selects a small geographical area or a very limited number of individuals as the subjects of study. Case study research is useful when a 'how' or 'why' question is being asked about a contemporary set of events over which the investigator has little or no control (Yin, 1994: 9). For a case study to be considered as qualitative, the researcher must investigate the meaning of experiences to the educators themselves, rather than generalising results to other groups of people. This study took place in the classrooms where action was observed and new knowledge sought. Another reason is that case studies are a common way of doing a qualitative inquiry (Denzin & Lincoln, 2005: 443).

Zainal (2007: 2) contends that the case study method enables a researcher to closely examine the data within a specific context. In this study, the researcher visited educators at their respective schools to determine their experiences in implementing the curriculum in their schools. It was important to choose a design that allowed for deep descriptions of this process. Also, case study research is flexible and enables the researcher to make changes along the way, for example, in one of the schools I decided to make a follow up question in order to get clarity.

Case studies are the preferred strategy when 'how' or 'why' questions are being posed, when the researcher has little control over events and when the focus is on a contemporary phenomenon within a real-life context (Creswell 2014 & Rozycki 2009). This study has asked 'how' questions, therefore, the case study was appropriate. Also,

a case study is especially appropriate when the boundaries between the phenomenon and context are not clearly evident. I wanted to find out how the educators presented their subject content in the classrooms. Attending a lesson does not necessarily mean that learners will easily adapt to the subject matter of the day.

The case study sometimes copes with the technical situations where there would be many variables of interest. This is the situation in classrooms, where learners and educators interact with each other and together with the subject content. What one observes has to be taken in context as the narrative can or cannot be useful unless the researcher explains the issues involved (Denzin & Lincoln, 2005). It was necessary for me to use more than one way of collecting data for the cases because multiple sources of evidence strengthen the claims that I would make. According to Soy (1997), a key strength of the case study method is about using multiple sources and techniques in the data collecting process.

In this study, I used interviews and observations to collect data. The major advantage of a case study lies in the richness of its descriptive information that results from the intensive study of the research. In this way, a lot can be learnt to implement what is already known. A case study provides more realistic responses than a purely statistical survey (Flyvberg, 2004; Shuttleworth, 2008).

The other advantage of the case study is its applicability to real life, contemporary human situations and its public accessibility through written reports. Case study results relate directly to everyday's experience and facilitate an understanding of complex real-life situations. The descriptions of the lessons in chapter four of this study give the reader a clue of what was happening in classrooms. The reader can listen to the voices of both the learners and educators and get what I experienced.

Flyvberg (2004) defends case study on the grounds that it produces the type of context-dependent knowledge, and the research on learning shows the necessity of allowing people to develop from rule-based to experts. In a teaching situation, well-chosen case studies can help learners to achieve competence, while facts and rules will only bring the learner to the level of beginners.

3.2.3 Selection of Participants

In this study, nine educators were purposefully selected from six high schools in three districts in the Province of KZN, namely Zululand, uThungulu and uMzinyathi to participate in the study. These schools were chosen because they were quintile one schools, meaning that they have insufficient resources and grade nine Natural Science educators were chosen because the subject they teach is the pre-entry subject for the FET phase. According to the Department of Basic Education (2011), most learners fail Physical Science at their exit class of FET level. The Grade 9 classrooms that participated were identified for their relevance. The idea of using this method is supported by Johnson (1997) who points out that case studies allow the researcher to get in-depth understanding of the phenomena.

Stevens (1993) also recommends that in order to see whether learners are taught according to the curriculum requirements, the case-study approach can be used. A case study is relevant because it focuses on a specific phenomenon such as a programme, event, process, person, institution or group (Creswell, 2007). For the current study, the program was the implementation of CAPS at the learning of Natural Science in grade nine. A particular topic of Natural Science was taught to learners by their educators at their particular schools. The major purpose of this design is to describe a unit, rather than to test hypotheses. I therefore present each of the six schools as the case. Each case tells a story of how the educator presented Natural Science topic to the learners. Soy (1997) warns that even though many researchers would like to tell the whole story, it is not possible because the whole story is above the individual thinking.

In this study, the focus was on the implementation of CAPS during teaching of Natural Science to grade nine learners. The topic educators chose was used as the subject content to explain the experiences of learners in relation to it. Soy (1997) stresses that case studies emphasize detailed contextual analysis of a limited number of events or conditions and their relationships. The case study like any other design has strengths and weaknesses. Sometimes one can hardly differentiate cause from effect, and inferring from the intensive study of one or a few cases involves a high and generally unknown amount of risk (Schram, 2003). A frequent criticism of the case study method depends on few cases which render it as incapable of providing a generalizing conclusion (Soy, 1997 & Shuttleworth, 2008).

Besides the criticisms, researchers are still continuing to use the case study research method with success in real-life situations. In this study, the schools were chosen from one category of schools, that is public schools.

In my opinion, experiences in other schools might not be different from what I observed in the public schools. From personal experience of observing lessons in different schools, I have reason to believe that there are other reasons for differences in planning and teaching of Natural Science for grade nine. I was the instrument of research who evaluated what was going on in the classroom. I analysed the data with an aim of answering my research questions. Being in the classroom helped me get an experience of what was going on in the classroom in terms of implementing CAPS at senior phase level.

Furthermore, while a Natural Science educator is trying to prove the hypothesis, a case study can sometimes introduce new results during its course, leading the research to take new directions, since it is flexible. In this study, I witnessed teaching methods that I had not known before; for example, one participant grouped learners according to their intellectual abilities and they worked on the chalkboard quite effectively.

3.3 Qualitative methods of data collection

Whatever people are saying or doing represent data during inquiry. Words and actions represent the data in a qualitative research, and it requires collective methods (Denzin & Lincoln, 2000). The ways of collecting data during investigation are through observation, face to face interviews, and recordings through a tape recorder.

3.3.1 The Interviews

The types of interviews conducted by the researcher are semi-structured interviews. In a semi-structured interview the interviewer uses a set of predetermined questions and the respondents answer in their own words. Sometimes the interviewer uses a topic guide that serves as a checklist to ensure that all respondents provide

information on the same topics (Kvale 1996b: 125). See Appendix C for interview schedule.

The researcher opted to use interview because it is recommended as an integral instrument of data collection in qualitative research (Silverman, 2001). Kvale (1983), cited in Obdenakker (2006: 1), defines a qualitative research interview as "an interview, whose purpose is to gather descriptions of the life-world of the interviewee with respect to interpretation of the meaning of the described phenomena". Gathering descriptions of life-world can be done in several ways, one of which is face-to-face interviews which are the most common. Besides face-to-face interviews, interviewing by telephone is popular too. For this research face-to-face interviews were conducted to collect data. Dialsingh (2008: 2) states that the main advantage of a face-to-face interview is the presence of the interviewer, which makes it easier for the respondent to either clarify answers or ask for clarification for some of the items on the questionnaire. I used interviews to get information from the participants. Through the interviews, clarifications and explanations of certain issues from the participants were clear. Since interviews are the product of what interviewee and interviewer talk about, and how they talk with each other, it was necessary for me to understand what was going on. After data collection, I discovered that interviews were the best method to use in this study. Interviews allow observations to go beyond external behaviour and make it possible to explore feelings and thoughts (Patton, 2001). I then used data from the interviews together with that gleaned from the observations in my analysis and interpretations of the findings of this study.

During interviews, I also asked probing questions, which are also recommended by Patton (1990). The purpose of asking questions was to get more details, to try to understand, and to encourage the interviewee to tell me more. I indicated that my desire was to know more about verbal or non-verbal expressions as well as the use of gestures.

The interviewer in this study was seeking for clarifications from the interviewees without intimidating them. In this study, semi-structured interviews were conducted by the interviewee. Semi-structured interview questions were asked from nine educators of different schools. The questions were about their experiences on implementing CAPS policy and its related principles at grade nine level.

A tape recorder was used to record the conversation between us. Permission was sought from the participants to record the interview. Tape recording was useful in order to check against manually recorded responses, especially when direct quoting was required. The disadvantage for recording is that the presence of the tape recorder might change the interview situation. This view is also supported by Borg & Gall (1989). Voices were clear and I did not have problem to transcribe what was recorded.

3.3.2 Observation

The primary reason for using the observational method in this study was to check whether what participants said during the interviews was in line with what they actually do in the classroom. There are two principal types of observation: participant and non-participant observation. In this study I used non-participant observation. I sat at the back from where I could observe without obstructing anyone. I wanted to get first-hand information of what the participants were exposed to and to compare the input with the curriculum as prescribed by the Department of Basic Education with reference to the particular topic. At all times, I was observing participants whether they followed CAPS principles. Mulhall (2003: 308) contends that observers have a great degree of freedom and autonomy regarding what they choose to observe, how they filter information, and how it is analysed. However, Baker (2006: 171) suggests that the researcher has to spend considerable time in the field observing with the possibility of adopting various roles in order to gain a more comprehensive understanding of the people being studied.

Cohen and Manion (1994) also point out that observations lie at the heart of every case study. On the other hand, (Barker 2015: 1) states that observation is the way of gathering data by watching behaviour and events, or noting physical characteristics in their natural setting. In the view of Bryman (2008: 1), observation is holistic, unstructured and unfocused, with the investigator attempting to document as much as possible about the setting and its participants in order to discover themes of interest. In semi-structured observation the researcher enters the field with some general ideas of what might be salient, but not specifically of what will be observed.

Observations provided me with the opportunity to explore what people actually do (O'leary, 2005). My observation was based on Cueto, Ramirez and Leon (2008) who

maintain that in studies where the main source of data is a teacher self-reporting coverage of competencies, there is always the concern that the participant might over-report to impress the researcher. This is also supported by Yin (2011) who proclaims that what anyone sees with naked eyes cannot be replaced by what others might have reported to you or what the author of some document had seen. Observation, is also prolonged by the chances of happenings as it is bound by the truth if one observes and makes own assessment rather than relying on someone's story.

I listened to verbal voices and observed the participants. I witnessed chalkboard summaries and other activities that provided a clear indication of how teachers conceptualised the curriculum in the research site. I assured participants in writing and by word of mouth that the purpose of observing them was not to judge them but to see whether CAPS policies were implemented by educators. Before each observation session, I briefly asked the educators to tell me what they were going to teach on that day and also if there was anything that they thought I should know beforehand. Other educators were reluctant to tell me what they will teach on the day or refuse to tell me. Even though others were reluctant to supply me with their plans beforehand, but I still insisted to know beforehand how the teaching and learning was expected to unfold in the classroom.

After the observation I had a conversation with the participants in order to enhance what have been tape-recorded and jotted down during observation period. These were however brief conversations as other educators were rushing to move to other classes to honour their periods on the time table. These observations took place over a period of two weeks. I observed participants at each school for the full day or two days. After that I spent one week transcribing and studying my notes and trying to make sense of what I had observed in preparation for what I thought was the real fieldwork. I later decided to use the results from the first school to build up one of my three cases. I then visited the other two schools to make final arrangements for my observations.

The observations at the other schools took place during the teaching periods. Sometimes it was possible for me to go from one school to another on the same day during the visiting days. I used to come two hours before Natural Science observations would start. More details are given in the following sections.

3.4.1 Process

The process for conducting this study was done according to different cases. The six cases were followed as listed below. Since the Province of KZN is very big and comprises 11 districts where schools are far apart from one another, the researcher had to spend one or two days in one school to interview and observe educators. Sometimes this took three days in high schools. The researcher had to book accommodation at the nearest bed and breakfast in order to start early and finish late on certain days. Data collection was conducted in the manner outlined below. The names of schools and participants are not actual names in order to maintain anonymity and confidentiality.

(a) Case: 1

(i) Research site

The first case was at Inzululwane High School (not the actual name), which is the high school in the district of Zululand under Nongoma circuit. Inzululwane had a Post Provisioning Norm (PPN) of 13 educators including the principal during the period of data collection. The PPN is the number of educators prescribed by the DBE for each school. Inzululwane High School has eight classrooms, one library, one laboratory, a staffroom, principal's office combined with the secretary's office, and one head of department's (HoD) office.

(ii) Participants

Since the target group of this study was Senior Phase educators, the researcher had to interview one Grade 9 educator. The educator was given a pseudonym, Miss Cricket. She was 35 years old during data collection and had been teaching Grade 9 for a period of 10 years. Her highest educational qualification was the Bachelor of Education Honours degree.

(b) Case: 2

(i) Research site

The second case was at Emganwini High School (not actual name), in the district of Zululand and the circuit is called Ulundi. This high school is in the rural area called Kwa-Ceza. It starts from Grade 8 up to Grade 12. During the interview period, Emganwini High School had a PPN of 10 educators including the principal. The school has two buildings and each building had five classrooms, making 10 classrooms in all. Out of those 10 classrooms, one was used as the office of the principal, another as the staff room and the other one as the library. That school had one HoD who shared the office with the principal.

(ii) Participants

After making arrangements with the principal and Mrs. Ballpoint (not actual name) we agreed to have interviews during school hours. Mrs. Ballpoint was 46 years old and had been teaching Natural Science at Grades 8 and 9 (Senior Phase) for 13 years. Her teaching experience was 22 years. She had a Secondary Educators Diploma and Bachelor of Arts degree. She was trained to teach Biology and English. During the implementation of C2005 she attended a workshop for two Learning Areas called LLC and Natural Science. She was converted to teach Natural Science because there was no other teacher to do so. From there she started teaching Natural Science until the time of interview. Mr. Mtshali (not actual name) was 38 years old. His academic qualifications were a Secondary Educators Diploma and Bachelor of Education degree. He started teaching in 2003 and had spent 12 years at Emganwini High School. He was teaching Natural Science at Grades 8 and 9.

(c) Case: 3

(i) Research site

The third case was at Izindoni High School (not actual name), situated at uThungulu district in the area of Eshowe under Nxamalala tribal authority at the village called Bhamu. There are three blocks in this school. The PPN of this school is 17 educators including the displaced Head of Science Department. The school has an

administrative block with a staff room, principal's office, HoD office and the secretary's office.

(ii) Participants

For this research the Mathematics and Science educator who was also teaching Natural Science at Grade 9 voluntarily agreed to participate. Mr. Trigonometry (not actual name) was 48 years old at the time of interview and had been teaching Mathematics and Physical Science for 13 years. His highest qualification was a Secondary Educators Diploma. Another educator who volunteered to participate was Mrs. Kubheka (not actual name), who was 36 years old and had a Bachelor of Education degree. Mrs. Kubheka's teaching experience was 10 years and had been teaching Natural Science at Grade 9 level for nine years.

(d) Case: 4

(i) Research site

The fourth case was at Indibilishi High School (not actual name), in the district of uThungulu. It starts at Grade 8 and goes up to Grade 12. The school had a Post Provisioning Norm (PPN) of eight educators including the principal. Indibilishi High school has two buildings, one with four classrooms and the other with three, making seven classrooms in all. Of those seven classrooms one was used as the office of the principal, one as the staff room and the others were for teaching purposes. The school had one HoD who shared the office with the principal.

(ii) Participants

After making arrangements with the principal and Mr. Mathunjwa (not actual name), we agreed to have interviews after school. Mr. Mathunjwa was 33 years old and he had been teaching Natural Science at Grade 9 (Senior Phase) level for eight years. His teaching experience was nine years in all. He had a Secondary Teachers' Diploma and Bachelor of Arts degree. He was trained to teach Natural Science and Mathematics. During the time of his employment in 2008, NCS was in place in schools,

and the plans of implementing CAPS in the following years were in place. He then attended a workshop for two subjects: Mathematics and Physical Science. He was then converted to teach Natural Science since there was no other teacher to teach the subject. At the time of data collection Mr. Mathunjwa was teaching Natural Science.

(e) Case: 5

(i) Research site

The fifth case was at Umkhukhu High School (not actual name), in uMzinyathi district in the area of Mpofane next to Msinga village. This high school is under the chieftainship of Zondi tribal authority. Umkhukhu high starts from Grade 8 and goes up to Grade 12. This high school had 24 educators including the principal, deputy principal, four HoDs and 18 post level one educators. Although the school had a PPN of 24, surprisingly there was no administrative clerk.

(ii) Participants

Miss Msweli (not actual name) was teaching Natural Science at Grades 8 and 9 and volunteered to participate in this study. Miss Msweli is originally from the township called KwaMashu in Durban. Since the school does not have cottages, Miss Msweli was renting a rondavel house which was not very far from the school. Miss Msweli was 37 years old during the time of data collection and her highest academic qualification was a Bachelor of Education degree. Her subjects of specialisation were Mathematics and Physical Science. Miss Msweli had been teaching Natural Science for 12 years at Grades 8 and 9 levels at this school. Another educator who volunteered to participate in the study was Miss Mncanyana (not actual name), who was from Inanda township in Durban. She was 39 years old and had a Bachelor of Education degree from one of the universities in KZN. Miss Mncanyana had been teaching Natural Science in Grade 9 for 13 years at this high school. Although her subjects of specialisation were Business Studies and Economics she was forced by circumstance to teach Natural Science at Grade 9 level, since the PPN of the school did not permit the school to employ an additional educator and so some educators were converted to teach other subjects.

(f) Case: 6

(i) Research Site

The sixth case was at Zukana High School (not actual name), in uMzinyathi district in the area of Msinga village, and is under the chieftainship of Zondi tribal authority. Zukana teaches classes from Grade 8 to Grade 9. The school had 17 educators consisting of the principal, the deputy principal, two HoDs and 13 post level one educators. Since the school had a PPN of 17, it was eligible to have an administrative clerk, but the DBE had not provided one.

(ii) Participants

Mr. Ndabezitha (not actual name) was teaching Natural Science and IsiZulu at Grade 9, and volunteered to participate in this study. Mr. Ndabezitha was from Nhlalakahle township, not very far from Msinga. This school also did not have educators' cottages and Mr. Ndabezitha was paying rent to a local businessperson. Mr. Ndabezitha was 40 years old and his highest academic qualification was a Bachelor of Education (Honours) degree. Mr. Ndabezitha started teaching as an unqualified teacher for five years before graduating as a qualified teacher. He had 17 years of teaching experience including the five years that he served as an unqualified teacher. Although Mr. Ndabezitha was teaching IsiZulu and Natural Science, he was interviewed for Natural Science.

3. 4. 2. Procedure followed during investigations

After recognising that the content of the subject matter is a worthwhile variable in the study of the teaching and learning of chemical reaction, I reviewed literature on the subject so as to understand what other researchers have said about teaching of Natural Science. The review confirmed the need for assistance from DBE in the context of my own observations in order to learn Natural Science effectively. This answers one of the research question which was asked in chapter one. The question

was based on the support received by educators from the South African Department of Basic Education, whether it was helpful to educators in the implementation of CAPS.

During the stage for going into the field, I communicated with the principals of the schools I had identified as participants in the study. I sent letters to the heads of the schools, as per procedure, expressing my wish to carry out my research in their respective schools. To establish lines of communication, I obtained signed permission from the school principals and educators, two months in advance before visiting schools. A copy of the objectives of the study was made available to all concerned parties in order to acquaint them with the requirements of the study. The participants have remained anonymous throughout the research report. I observed participants and took notes. I audio-taped what was happening in the interviews so that I could compare it with my manually recorded notes. During interviews with the educators, I took notes and audio-taped while the teacher answered my questions.

I asked the teachers to tell me how they used CAPS policy when teaching Natural Science to grade nine learners. I asked them to give explanation about the kind of training they received during the implementation of CAPS. I asked the teachers about the kind of support they receive or need from the DBE in order to implement CAPS policy effectively. Lastly, I asked educators to give highlights as well as the impact of using CAPS policies when teaching Natural Science at grade nine.

Through interviews, teachers gave an account of their situation, feelings and perspectives in relation to the teaching and learning of Natural Science. I developed interview protocols for use with the teachers. However, during the interviews I did not stick to the protocols because the interviewees sometimes explained the information before I asked for it.

I used a voice recorder for all the formal interviews and all the lessons observed. For informal interviews I relied on my handwritten notes. It was not possible for me to record whilst we were standing in the passage or whilst we were walking away from the class room with the teacher preparing for the next class. Tape-recording was useful to check against manually recorded responses especially when direct quoting was necessary in the report. The recorded interviews were transcribed as soon as possible after the interview in order to minimise possible distortion in the report.

After the data was assembled in a presentable form, I discussed how the nine educators provided their subject content to learners using CAPS policies. Through the discussions, themes emerged which are very important to this study. I then used the results of the current research to identify further gaps for the future studies. I then presented the conclusion and recommendations for further study.

3.5 Data Analysis

During the analysis of data, there were few well established and widely accepted rules for the analysis of qualitative data (Bryman, 2008). Usually, analysis of qualitative data consists of three parts. These parts are noticing, collecting and thinking about interesting things. Interesting things are the occurrences; it can be words or actions that resonate with the study topic. During my observation, a lot of activities took place and it was impossible to record all of them at the same time, but my focus was not removed from what was happening in the interviews. After collecting data through interviews and observations, I then presented it in three cases. I provided comments about all the activities, using the observation data, the interview data, as well as data gained from the literature reviewed. A discussion of data findings was then presented and sources of information used by educators during the interviews were also identified. Collating of the findings was difficult to deal with it, as most of the participants presented interview answers in different ways. In such instances, Soy (1997) expresses the need for researchers to stick to key factors and events throughout the duration of the study so as to attend to them at a later stage.

In this qualitative research, data were collected from nine participants comprising educators only. The selection of the participants was regardless of gender, and what was important was not who gave information but how that data contributed to the understanding of how CAPS was implemented at grade nine classes. Each of the nine educators responded to semi-structured questions. I conducted individual interviews on each of the selected schools. Data were transcribed using audio recordings and notes written during the discussions. The schools and the participants were coded to hide the identity of participants. From the gathered data, I saw important emerging trends culminating from six broad themes and sub-themes.

3.5.1 Observation Data

From the daily observation data, I decided to analyse data immediately after being collected to avoid being overwhelmed by masses of data (Soy, 1997). I then analysed the observed behaviour of participants during the interviews as to whether they are in line with the prescribed curriculum or not. As Wood and Kroger (2000: 3) suggest, the researcher must analyse the language used during teaching and learning to see whether the mother tongue was used for clarification. My analysis included parts of the lesson plan, teaching methods, learner-centredness, use of resources, talents or qualities of facilitating the subject lesson, and testing whether techniques were according to the evaluation techniques of CAPS. A discourse data analysis was from the written texts or tape-recordings, and it was in the form of a single sentence. Lastly, as per Brown and Yule (1983: 5), the researcher compared participants' interviews and observations, and then established the trustworthiness of the study.

On top of my notes, I also made analysis as I went along. The analysis in this study is organized around themes that emerged from the data collected during the interviews of Natural Science educators in the respective schools. After completing the observation it was not necessary for me to report on every observation because of the huge volume of material. I decided to talk about the similarities and differences made by the participants (Mulhall, 2003: 308). It provides evidence for process, something that is continually moving and evolving. In this study, observation permitted the researcher to study participants in their natural environment in order to understand things from their perspective.

3.5.2 Interview Data

In the first case, the researcher prepared data for analysis. The data from interviews were then transcribed and translated. The researcher read the background literature and interviews to find, refine and elaborate concepts, themes and events. The researcher coded the interviews to be able to retrieve what interviewees said about the identified concepts, themes and events. In the second phase, the researcher worked with the coded data, comparing within and between interviews and combining separate descriptions to formulate a coherent narrative. In doing so, the researcher sought to answer the research questions in ways that draw broader theoretical conclusions.

Data analysis and interpretation were done after data collection. During data analysis I read and re-read the transcribed interviews and also listened to the tapes in order so to keep to the original data source. Since the observation data were already analysed, the interview data were then compared to my observation data in order to support or challenge what was observed in the classrooms. Interview data were presented together with data from observation because what the teachers said helped me understand their way of teaching. Mason (2002) says that the social world is always already interpreted because what we see is shaped by how we see it. Data management is the part of data analysis and its aim is to keep high quality and accessible data. That is why collected data were stored and retrieved for analysis. The researcher transcribed and analyzed the interviews immediately. Data were sorted and grouped according to research questions, thereafter refined into a coherent new structure. The tape recorded words were transcribed into texts. Data were then transcribed according to themes.

3.6 Issues of Trustworthiness, Cross Checking and Dependability

3.6.1 Trustworthiness of data

Research is a public trust that must be conducted ethically; trustworthy and socially responsible if the results are to be valuable. During the interviews the researcher used both the audio recordings and written notes for triangulation to establish the trustworthiness of the interviews. The participants involved in the research had knowledge about Natural Science. The questions on the interview instruments were based on the implementation of CAPS policies during the teaching of Natural Science. The researcher tried to minimise bias by examining each participant in great depth. The researcher sought patterns by assessing the accuracy of the sources of data. The researcher was cautious about the predispositions and influence on the social situation and that is why he minimised the biasness. Several data sources were used to collect data from educators of high schools who were teaching Natural Science at grade nine. The researcher explored data for information adequacy, usefulness, and centrality. This helped the researcher to illuminate the research problem and which data are central to the research about the factors affecting learner academic performance in Natural Science. The researcher needed to be aware and also identify participants who were biased during the interviews through probe questions.

3.6.2 Cross checking

Findings obtained through tape-recording educators were cross-checked against the information jotted down by the researcher during the interviews. Findings that emerge from the interviews were used to identify the poor performance or good performance of learners in Natural Science. In addition to audio-recordings, the researcher also wrote notes that helped him during transcription. Cross-checking took place immediately after the initial interpretation of the results to ensure that the perspectives of the participants were captured correctly. This was done with all educators who participated in the research. The researcher verified the consistency of the data through process notes of the interviews. Cross checking was used in order to control bias and establish valid research. The researcher wanted to engage in research that probes for deeper understanding rather than examining surface features (Johnson & Christensen, 2008: 4). Probing questions were used by the researcher to prevent bias. The researcher checked problems that were experienced and ensured that participants do not experience difficulties in answering interview questions.

3.6.3 Dependability

Reliability in qualitative studies may be problematic since human behaviour differs over time and the replication of a study will not produce the same results (Merriam, 1998). There is a need for the researcher to establish consistency when reporting on the results. In order to maintain consistency, triangulation of results was used and the semi-structured questions were asked to all teachers. Examination of raw data and process notes was used by the researcher to verify the steps of the research. According to Lincoln and Guba (1985: 300-317), inquiry audit can be used to examine both the process and the product for the research for consistency. The researcher established standard conditions of data collection by giving participants the same directions and have the same time frame in which to answer questions. The interview instruments were appropriate in reading level and language. The researcher ensured that questions mean the same to all participants; checked that all the questions were

concise and clear and checked ambiguity in sentences. The researcher motivated participants to answer questions by ensuring confidentiality of participation and explaining the importance of the research. The researcher compared data found from all participants in order to find regularities in the data and see if the same patterns were kept. Educators were asked about their experiences of implementing CAPS policies when teaching grade nine Natural Science. Educators did confirm the subject and the grades they were teaching.

3.7 Ethical issues

Before the interviews, verbal consent was obtained from the participants. The purpose of the research was explained to the participants. In addition, assurance was given of the confidentiality of their responses in the research report. In order to ensure confidentiality, no names of participating educators were used in the research. The interviews were transcribed and transcriptions were analysed to identify codes, categories and emerging themes (Neumann, 2006: 18). Participation in the individual interviews was voluntary. Participants had the right to withdraw at any time without penalty. The researcher applied for permission to carry out the research in schools from the Department of Basic Education. This application was successful. Consent was also obtained from principals and educators of the participating schools. The researcher had to apply for clearance from the Research Ethical Clearance Committee of the College of Education at UNISA. The permission was granted by the Ethics Committee.

3.8 Limitations

The study was confined to the Province of KZN due to costs relating to accommodation during investigation as well as travelling; hence the study did not represent all schools in KZN. The research was conducted in some high schools within certain districts of KZN. It was conducted in IsiZulu and English, depending on the flexibility of the educators, although questionnaires were written in English. Independent schools were excluded from this study, and the findings from this study cannot be generalised to all schools in the Province of KZN.

3.9 Summary

This chapter examined the research design, taking the qualitative approach as the most appropriate. The qualitative approach enabled the researcher to explore and interpret the views of educators about the implementation of CAPS at senior phase. The researcher described the data collection instruments that were used to collect the data. The next chapter presents the analysis and description of the data gathered. In the analysis, educators would be discussed separately as stakeholders of practice. The factors affecting educators of grade nine Natural Science would be determined and linked to the teaching and learning within Natural Sciences in order to improve performance.

CHAPTER FOUR

PRESENTATION AND INTERPRETATION OF FINDINGS

4.1 INTRODUCTION

In Chapters one and two the main critical research questions were asked and a literature review was carried out to provide pre-knowledge about the curriculum change and development policy. Chapter three further explained the research design, where the approach is qualitative and the methodology is the case study. It further explained that this research is about educational policy implementation, and that its aim is to understand the opinions and understandings of educators regarding the implementation of CAPS. This study is limited to Senior Phase (Grades 9), and it focuses on three districts, namely uThungulu, Zululand and uMzinyathi districts in the

Province of KZN. In the previous chapter, the evidence-gathering strategies used during the interview processes and the steps followed were discussed. Issues about the implementation of CAPS within the GET band were also discussed. The aim of that discussion was to develop an understanding of why educators think that the curriculum recommendations would help in guaranteeing the success of CAPS teaching in schools.

Table 4.1.1 represents the procedure that should be practised when analysing data (Creswell, 2007: 156-157) and also includes the procedure followed by the researcher during the process of coding and establishment of themes.

Table 4.1.1: Procedure used to analyse data (adapted from Creswell 2007: 156-157).

Data analysis and representation	Case study	Procedure in this study
1. Data managing	Create and organise files for data.	The researcher compiled and reduced the semi-structured interviews and non-participant observation to manageable and understandable information.

2. Reading memoir	Read through text and make marginal notes from initial codes.	In this step the researcher read through the collected data to make sense of it by making notes from initial codes.
3. Describing	Describe the case and its context.	In order to contextualise Senior Phase educators' understanding and implementation of CAPS, the researcher detailed the information about the cases in this study. This gave background information about the training of educators before the implementation of CAPS.
4. Classifying	Use categorical aggregation to establish themes or patterns.	In the process of coding the researcher noted the relationships in the collected data. The process also involved checking and rechecking accuracy in the collected data. This process was the establishment of themes through coding. Similar phrases were assigned the same codes.
5. Interpreting	Use direct interpretations.	The researcher did the direct interpretation of information gained through the actions and words of participants.
6. Representing and visualising	Present in-depth picture of the case (or cases) using narrative tables and figures.	The interpretation of information was represented by the word tables to give a clear picture of what transpired in the field.

During this process of data reduction the following six main themes emerged:

Theme A: Principles of CAPS;

Theme B: Training programmes received by educators;

Theme C: Instructional planning;

Theme D: Educators' experiences with curriculum practices;

Theme E: Assessment of learners; and

Theme F: Miscellaneous issues.

Thematic analysis is the process of encoding qualitative information where the researcher develops codes, words or phrases that serve as labels for sections of data (Boyatzis, 1998: 7). This may be a list of themes, a complex model with themes, indicators, and qualifications that are causally related; or something in-between these two forms, but this depends on the methodology and research question; codes can come in many shapes and sizes.

Nine participants took part in this study (see Table 4.1.2). For identification, the participants were allocated codes in the form of pseudonyms in order to maintain anonymity. Themes were identified by letters A, B, C, D, E, and F and sub-themes were A1, A2, B1, B2 etc.

Table 4.1.2: Research sites and participants

School name	School type	Educator name	Age (yrs)	Sex	Educator qualifications	Teaching experience	Grades Teaching
Inzululwane	High	Miss Cricket	35	F	B.Ed. (Hons)	10 years	9
Emganwini	High	Mrs. Ballpoint	46	F	STD & BA degree	22 years	8 & 9
		Mr Mtshali	38	M	STD & B.Ed. Degree	12 years	8 & 9

Izindoni	High	Mr Trigonometry	48	M	STD	13 years	9
		Mrs. Kubheka	36 years	F	B.Ed. Degree	10 years	9
Indibilishi	High	Mr Mathunjwa	33 years	M	STD& BA Degree	9 years	9
Umkhukhu	High	Miss Msweli	37	F	B.Ed. degree	12 years	8 & 9
		Miss Mncanyana	39	F	B.Ed. degree	13 years	9
Zukana	Primary	Mr Ndabezitha	40	M	B.Ed. (Hons)	17 years	9

F=Female; M=Male; BA=Bachelor of Arts; B. Ed=Bachelor of Education; Hons=Honours; STD=Secondary Educators Diploma.

4.2 Description of Findings

The fieldwork for this study was conducted during the period of March to May 2016. It consisted of interviews and observations of nine grade nine educators from six different high schools. Formal and informal interviews were conducted. It is from the aforesaid participants that the data collected are presented in the form of themes and sub-themes.

4.2.1 Theme A: Principles of CAPS.

In my discussions with senior phase educators (Grade 9 educators) I discovered that the South African National Curriculum Statement is based on social transformation, active and critical learning, high knowledge and high skills, progression, human rights, inclusivity, environment and social justice, valuing indigenous knowledge systems, credibility, quality and efficiency. This was revealed by Natural Science educators during the process of data collection in selected high schools of the KwaZulu-Natal

province. During my visits at schools, participants had to explain their understanding of CAPS principles.

School: Inzululwane High School

This section of the report describes the first case of this study. It reports on interviews and observations that took place at Inzululwane High School. Inzululwane High School (not the actual name) is a high school in the district of Zululand under Nongoma circuit. I interviewed and observed grade nine Natural Science lessons for one period. Lessons at Inzululwane High School are forty minutes long. A siren rings at the end of every forty minute interval. Learners move around when the bell rings while the teachers are usually in a fixed venue.

Teacher: Miss Cricket

Miss Cricket (not actual name) is one of the educators who agreed to be interviewed and observed for this study. She was 35 years old during data collection and had been teaching Grade 9 for a period of 10 years. Her highest educational qualification was the Bachelor of Education Honours degree in Senior Phase. At the time of the research, Miss Cricket was teaching Natural Science from grade eight to grade nine. During the day of interviews, Miss Cricket asked me to meet her at her classroom. The classroom was at the end of the middle building facing western side. The teacher's table was in front of the chalkboard and there was a wooden cupboard against the wall on the left side of the chalkboard. Miss Cricket stood by the cupboard with her table on the right when she started teaching. Learners sat in front of her with some of the desks against each other. On the four walls, there were charts with the logo for the Department of Education. After a brief introduction to the class I sat at the back of the class near the window where I had a good view of the whole class. I began my observation of a class lesson and later when the children had vacated the class, I started posing the question to Miss Cricket. The question was as follows: What is your understanding about CAPS principles and how do you implement them when teaching Natural Science in your class? Miss Cricket took her glass of water and sipped once, and then she responded as follows:

According to my understanding, the principles of CAPS are aimed to ensure that the gap that was caused by the educational imbalances of the past is closed (A1). And also the purpose of these principles in teaching and learning are to equip learners with the knowledge and skills for self-fulfillment and to participate meaningfully in the society (A2). When teaching using CAPS principles, I encourage learners to be active and think critically rather than rote learning and also I encourage them to achieve high knowledge and high skills (A3). I use these principles by giving learners the assignments and projects as well as encouraging them to go and get information for themselves in the libraries. Group-work is very effective when I use these principles; it is easy to identify those who need extra time and give those who grasp fast some more work to do (A4). My knowledge of understanding these principles make it easy for the learners to be involved actively in the lesson and learn with understanding (A5).

My observation during the interviews was that Miss Cricket was shaky; although she knows the principles and policies of CAPS she was not sure about her answers. Maybe she was not happy for me to ask her questions immediately after lesson presentation, even though children had vacated the classroom. It was me and her only in that classroom. But taking the above statements into consideration, Miss Cricket has a clear understanding of CAPS principle and she knows how to implement them.

School: Emganwini High School

Emganwini High School (not actual name) is in the district of Zululand and the circuit is called Ulundi. This high school is in the rural area called KwaCeza. It starts from Grade 8 up to Grade 12. During the interview period, Emganwini High School had a PPN of 10 educators including the principal. The school had two buildings and each building had five classrooms, making 10 classrooms in all. Out of those 10 classrooms, one was used as the office of the principal, one as the staffroom and one as the library. That school had one HoD who shared the office with the principal.

Teacher: Mrs. Ballpoint

After making arrangements with the principal and Mrs. Ballpoint (not actual name) we agreed to have an interview during school hours. She was trained to teach Biology and English. During the implementation of C2005 she attended a workshop for two

Learning Areas called LLC and Natural Science. She was converted to teach Natural Science because there was no other teacher to do so. From there she started teaching Natural Science until the time of interview.

My interviews started with Mrs. Ballpoint. It was early in the morning on Tuesday when Mrs. Ballpoint came to me at the staff room to greet me. She requested me to accompany her on her way to Grade 9A class. Grade 9A was the middle class in the first block. When we entered the class, all learners stood up and greeted me and Mrs. Ballpoint. What I observed on that day, all learners were in full uniform of the school. Mrs. Ballpoint introduced me to the class and she explained my reason to be in Grade 9A. Then she asked me to say few words to the class. I requested privacy with Mrs. Ballpoint, and went out of the class. I reminded her that the interview was about teachers only not learners. After that we went back to the class and I decided to sit at the back of the class. After that I asked the same question that I asked Miss Cricket. The question was as follows: What is your understanding about CAPS principles and how do you implement them when teaching Natural Science in your class? Without hesitating Mrs. Ballpoint said:

These principles assist educators to improve their practice in basics, review, evaluation and improvements (A1). They are the principles that give expression to the knowledge, skills and values of worth learning in South African schools (A2). Their aim is to ensure that learners acquire and apply knowledge and skills in ways that are meaningful to their lives (A3). In my planning I consider active and critical learning, high knowledge and skills, credibility, quality and efficiency, human rights, inclusivity, environment and social justice (A4). I use CAPS principles to arouse interests in activeness and critical learning of my learners by motivating them and to encourage them to be active by using a critical approach during my lesson presentation. The understanding of CAPS principles helps me to involve learners during teaching and learning periods (learner participation) (A5).

The response from Mrs. Ballpoint prompted a follow up question. I asked her: are your learners responding well to the teaching and learning of Natural Science in your class? Are you satisfied with the end results of your teaching? Without delay she said,

Of cause yes I am very happy about the performance of my learners. To tell you the honest fact, the lowest marks during the previous test was 41%. This shows that my methods of teaching Natural Science are the acceptable methods of CAPS. And it shows that even myself as the teacher, I understand what I teach and also understand my learners.

Whilst we were busy, the bell rang and I took my notes and the tape recorder and waited for her outside. She accompanied me and we both went to the staffroom. In the staffroom I asked another few informal questions to get clarity about what she said. I added that on my notebook. I was satisfied that Mrs. Ballpoint knew how to use CAPS principles when teaching Natural Science.

Teacher: Mr. Mtshali

After completing the interview with Mrs. Ballpoint, I had to wait for another interview with the educator for Grade 9B. In this school, Grade 9 classes were divided into three. I decided to interview two Grade 9s. I wanted to conduct my investigation with the third educator who teaches Natural Science at Grade 9C, but she refused to take part in this study. She mentioned the reason of being busy setting examinations for the mid-year examinations. I accepted her apology without any reservations, as she had a right to participate or not to participate. Then I decided to approach Mr. Mtshali to have interviews with him.

Our interviews commenced after lunch. Mr. Mtshali requested me to accompany him to Grade 9B. When we arrived at Grade 9B, I observed that half of the learners were not in the classroom. Mr. Mtshali offered me a seat in the front desk. I then started posing the same first question I asked Mrs. Ballpoint. Mr. Mtshali answered as follows:

CAPS principles are about learner-centeredness, learner pace and skill-based approaches (A1). The purpose of CAPS principles is to provide a new way of teaching, the use of new textbooks and other learner teacher support materials. They also help in developing the high level of knowledge and skills of learners which brings the new and comprehensive change of subject content and the new teaching style in all subjects (A2). CAPS bring high knowledge and high skills, integration and applied competence, and the good progression of learners. I also make sure that I do the

proper planning for the whole year (A3). My lesson plan is learner-centred and it accommodates all learners. The knowledge that the learners obtain is linked to other subjects (A4). This happens by having a clear understanding of what to do, and how to use textbooks that are relevant for teaching and learning. This reduces my problems when preparing lesson plans and subject content. It helps me to understand assessment techniques (A5).

What I observed from Mr. Mtshali's explanations about his understanding of CAPS principles was that he was not sure about CAPS principles. Although Mrs. Ballpoint and Mr. Mtshali were teaching in one school but their understanding of CAPS principles were not the same. This had a potential of disadvantaging their learners, as they would not get the same information, even though they are doing the same grade. My opinion is that Mr. Mtshali must work together with Mrs. Ballpoint in order to have better knowledge about CAPS principles.

School: Izindoni High School

Izindoni High School (not actual name) is in uThungulu district in the area of Eshowe under Nxamalala tribal authority at the village called Bhamu. There are three blocks in this school. The PPN of this school is 17 educators including the displaced Head of Science Department. The school has an administrative block with a staff room, principal's office, HoD office and the secretary's office.

Teacher: Mr. Trigonometry

For this research, the Mathematics and Science educator who was also teaching Natural Science at Grade 9D voluntarily agreed to participate. Mr. Trigonometry (not actual name) was 48 years old. At the time of interview he had been teaching Mathematics, Physical Science in FET phase for 13 years and for 9 years he had taught Natural Science at Grade 8 and 9. His highest qualification was a Secondary Educators Diploma. During the day of interviews, he called me to his classroom. His classroom was on the ground floor of the three storey building. He asked me to sit on

his chair. I then asked him to explain his understanding about CAPS principles. He responded by saying:

CAPS principles ensure that the educational imbalances of the past are redressed, in such that equal educational opportunities are provided for all sections of the population (A1). They are design to equip learners, irrespective of their socio-economic background, race, gender, physical ability or intellectual ability, with knowledge, skills and values necessary for self-fulfillment and meaningful participation in society as citizen of free country (A2). They also assist my learners in becoming active and critical learning, to have high knowledge and high skill; they bring credibility, quality and efficiency of learning (A3). When teaching using CAPS principles, I encourage learners to do self-discovery instead of giving them all the information (A4). My knowledge and understanding of CAPS principles sometimes influence my teaching in such that I address barriers of learning in the classroom by using various scientific strategies (A5).

The above responses are the same as the responses of Miss Cricket. The district of uThungulu and the district of Zululand are not far from each other. It may happen that Mr. Trigonometry and Miss Cricket were trained by the same facilitator. To me it shows that other educators do have knowledge of CAPS. Therefore CAPS can be easily implemented in the province of KwaZulu-Natal.

Teacher: Mrs. Kubheka

Another educator who volunteered to participate was Mrs. Kubheka (not actual name), who was 36 years old and had a Bachelor of Education degree. Mrs. Kubheka's teaching experience was 10 years and she had been teaching Natural Science at Grade 9 level for nine years. She was also teaching in the same school with Mr. Trigonometry. The difference was that; she was teaching Grade 9C whereas Mr. Trigonometry was teaching Grade 9D. Her classroom was on the second floor. Our interview with Mrs. Kubheka was on the second day after Mr. Trigonometry's interview.

The same question about the understanding of CAPS principles was asked to Mrs. Kubheka. Here is what she said:

CAPS principles assist educators and schools in their practice in terms of continual review, evaluation and improvement of skills (A1). The aim was to address the poor state of education and to improve learning and the work of educators. Schooling is strengthened through the use of these principles. Another purpose is that they encourage regular assessment (A2). In my planning I consider social justice, healthy environment, human rights and inclusivity, high level of skills and knowledge, clarity and accessibility, progression and integration, and assessment (A3). I provide opportunities for learners to analyse and research. I involve learners in decision making about code of conduct and reinforce positive behaviours amongst learners. I create opportunities to relate my subject to the broader social goal of promoting human rights. I use assessment strategies provided in the CAPS as a framework to ensure that learners develop a high level of knowledge and skills. I ensure that learners are progressing correctly through the knowledge and skills required by CAPS (A4). It creates a healthy classroom environment and makes learners to be confident, independent, multi-skilled and respectful and be able to participate in society activities (A5).

Even though Mr. Trigonometry and Mrs. Kubheka were teaching in the same school and the same grade, their understanding of CAPS principles was not the same. Sometimes things like these ones confuse learners. I suggest that educators of the same school must plan together. They must give same activities, tests and examinations in order to keep uniformity in the school.

School: Indibilishi High School

Indibilishi High School (not actual name) is in the district of uThungulu. It starts at Grade 8 and goes up to Grade 12. The school had a Post Provisioning Norm (PPN) of eight educators including the principal. Indibilishi High school has two buildings, one with four classrooms and the other with three, making seven classrooms in all. Of those seven classrooms one was used as the office of the principal, one as the staffroom and the others were for teaching purposes. The school had one HoD who shared the office with the principal.

Teacher: Mr. Mathunjwa

After making arrangements with the principal and Mr. Mathunjwa (not actual name), we agreed to have interviews after school. Mr. Mathunjwa was 33 years old and he has been teaching Natural Science at Grade 9 (Senior Phase) level for eight years. His teaching experience was nine years in all. He had a Secondary Teachers' Diploma and Bachelor of Arts degree. He was trained to teach Natural Science and Mathematics. During the time of his employment in 2008, NCS was in place in schools, and the plans for implementing CAPS in the following years were in place. He then attended a workshop for two subjects: Mathematics and Physical Science. He was then converted to teach Natural Science since there was no other teacher to teach the subject. At the time of data collection Mr. Mathunjwa was teaching Natural Science. On the day of interview I arrived at the school early because I wanted to meet Mr. Mathunjwa before the interview started. I wanted to clarify certain things about voluntary participation and confidentiality. I conducted the interview at his Grade 9 classroom. During the interview I asked Mr. Mathunjwa to explain his understanding of CAPS principles. Mr. Mathunjwa responded as follows:

My understanding of CAPS principles is that it makes quality lives of all citizens (A1). The purpose of CAPS principles is to equip learners with knowledge, skills and values (A2). I consider outcomes-based education, high knowledge and high skills, integration and applied competence, and progression (A3). I integrate the knowledge and skills defined by CAPS principles and also use progression in developing more advanced and complex knowledge and skills since subject statements show progression from one grade to another (A4). My understanding of CAPS principles have influenced me to believe that any unqualified educator cannot cope in teaching learners without having attended in-service training workshop for CAPS and supervised by a qualified and experienced educator who has basic understanding of the previous curriculum (A5).

Mr. Mathunjwa was very clear in his description of the principles of CAPS as well as his implementation of it when teaching Natural Science. This shows that educators were trained before the implementation of CAPS in schools.

School: Umkhukhu High School

Umkhukhu High School (not actual name) is in uMzinyathi district in the area of Mpofane next to Msinga village. This high school is under the chieftainship of Zondi tribal authority. Umkhukhu high starts from Grade 8 and goes up to Grade 12. This high school had 24 educators including the principal, deputy principal, four HoDs and 18 post level one educators. Although the school had a PPN of 24, there was no administrative clerk.

Teacher: Miss Msweli

Miss Msweli (not actual name) was teaching Natural Science at Grades 8 and 9 and volunteered to participate in this study. Miss Msweli is originally from the township called KwaMashu in Durban. Since the school does not have cottages, Miss Msweli was renting a rondavel which was not very far from the school. Miss Msweli was 37 years old during the time of data collection and her highest academic qualification was a Bachelor of Education degree. Her subjects of specialisation were Mathematics and Physical Science. Miss Msweli had been teaching Natural Science for 12 years at Grades 8 and 9 level at this school. My interview with her started at 8 o'clock. This was the first period of the school. The young Miss Msweli requested me to join her in Grade 9A. Before we started the interview, I decided to supply Miss Msweli with the interview questions. She looked at the first question and she said "I am ready we can proceed with the process". She answered the first question as follows:

CAPS principles are there to communicate the essential features and educational proposals. These are design principles that assist a learner and a teacher (A1). In my daily preparations, I make sure that the challenges, enjoyment, breadth, progression, depth, personalisation, choice, coherence and relevance are considered in my planning (A2). But the most commonly principles I prefer to use are expectation, inclusion and learning (A3). These principles are demonstrated in classroom through reflections on learners' work, topic choices, questions for investigations, tasks as well as discussions about learners' progression (A4). During teaching and learning, I normally operate as the facilitator. This creates the good environment for all types of learners, even those who are challenged physically and mentally. All learners get equal opportunities (A5).

Miss Msweli brings something different from other educators that I have already interviewed. She views CAPS as communicative essentials of educational proposals. She further demonstrated the methods she considered in her daily preparations. To me it tells me that she knows and understands the principles of CAPS.

Teacher: Miss Mncanyana

Another educator who volunteered to participate in the study was Miss Mncanyana (not actual name), who was from Inanda township in Durban. She was 39 years old and had a Bachelor of Education degree from one of the universities in KZN. Miss Mncanyana had been teaching Natural Science in Grade 9 for 13 years at the above mentioned high school. Although her subjects of specialisation were Business Studies and Economics she was forced by circumstances to teach Natural Science at Grade 9, since the PPN of the school did not permit the school to employ an additional educator and so some educators were converted to teach other subjects. Miss Mncanyana was teaching Natural Science at Grade 9 B. Our interview started after 11am on the same day as Miss Msweli's interview. Miss Mncanyana responded as follows to the first question of interview schedule:

CAPS principles assist educators and schools in practice, review, evaluation and improvement (A1). The CAPS principles assist me in my planning. The learning challenges about the progression of learners, the achievement of advance level of understanding, individual needs and talents of learners, opportunities for extended learning activities of gifted learners and the relevance of learners' lives in the present and the future are easily addressed (A2). These principles are always included in my lesson plan, class activities, assignments, tests and in any other assessment (A3). The reason for including them is that learners must demonstrate these principles in classrooms through opportunities given to them in order to reflect and decide their learning steps, goals, choices, questions for investigations as well as to discuss their progress and achievement with educators and parents (A4). These principles influence my teaching in such a way that every planning I make includes principles, and these principles reveal hidden talents and skills from my learners (5).

In our discussions with Miss Mncanyana, I observed that she was not sure about the principles of CAPS. She was mixing things, and sometimes contradicting herself. Miss

Mncanyana needs some assistance in order to help her improve the teaching of Natural Science at a high school level. I do understand that her subjects of specialisation are the Business Economics and Economics, but that does not mean that she must be clueless about the CAPS principles. This tells me that in other schools, CAPS was poorly implemented.

School: Zukana High School

Zukana High School (not actual name) is in uMzinyathi district in the area of Msinga village, and is under the chieftainship of Zondi tribal authority. Zukana teaches classes from Grade 8 to Grade 9. The school had 17 educators consisting of the principal, the deputy principal, two HoD's and 13 post level one educators. Since the school had a PPN of 17, it was eligible to have an administrative clerk, but the DBE had not provided one.

Teacher: Mr. Ndabezitha

Mr. Ndabezitha (not actual name) was teaching Natural Science and IsiZulu at Grade nine, and volunteered to participate in this study. Mr. Ndabezitha was from Nhlalakahle township, not very far from Msinga. This school also did not have educators' cottages and Mr. Ndabezitha was paying rent to a local businessperson. Mr. Ndabezitha was 40 years old and his highest academic qualification was a Bachelor of Education (Honours) degree. Mr. Ndabezitha started teaching as an unqualified teacher for five years before graduating as a qualified teacher. He had 17 years of teaching experience including the five years that he served as an unqualified teacher. Although Mr. Ndabezitha was teaching IsiZulu and Natural Science, he was interviewed for Natural Science. Our interview with Mr. Ndabezitha was in the afternoon, during study period. Mr. Ndabezitha requested me to interview him on the last period, as he was very busy conducting tests for IsiZulu at Grade 12. Our interview started smoothly and I asked Mr. Ndabezitha to give me his understanding about the principles of CAPS. He commented by saying:

Educational imbalances of the past are redressed through CAPS principles and everyone has an opportunity to get proper education (A1). The purpose of these principles is that as educators we have to look at them when we plan our lessons or

during teaching and learning (A2). I usually consider social and environmental justice, human rights, inclusivity, high knowledge and high skills, integration and applied competencies and outcomes-based principles in my planning (A3). I ensure that each and every lesson I plan is learner-centred. My lesson also ensures that everyone is accommodated and brings the information he/she gained irrespective of the place of residence (A4). These principles ensure that when I come to class I am fully prepared for each and every lesson. I am prepared for the challenges that I will be faced with. I must know what is it that my learners have to achieve. I ensure that learning environment is conducive, teaching and learning is taking place effectively (A5).

The statements made by Mr. Ndabezitha proves that educators were trained before the implementation of CAPS. The question of being properly trained or poor trained can be only determined by the end results. The aim of this study is to get the views about the implementation of CAPS in grade nine classes.

4.2.2 Discussion of Findings

On the main theme, some participants have a common understanding about CAPS principles, as shown by Miss Cricket, Mr. Trigonometry and Mr. Ndabezitha. These participants believed that CAPS principles were designed in order to close the gap which was caused by the previous apartheid regime, where black learners were subjected to poor quality education (refer to subtheme A1). Similar to the comments made by Mrs. Ballpoint, Mrs. Kubheka and Miss. Mncanyana in A1, all of them pronounced that CAPS principles were designed to help educators and schools in their teaching practice, the review of subjects, evaluation and improvement. Different ways of understanding CAPS principles pronounced by the other three participants in A1 show the variance in ways of understanding CAPS principles.

In subtheme A2, where participants had to show their understanding of the purpose of CAPS principles, participants demonstrated their ways they understood the principles differently. Miss Cricket, Mrs. Ballpoint, Mr. Mtshali, Mr. Trigonometry and Mr. Mathunjwa said that CAPS principles in teaching and learning were designed in order to equip learners with knowledge and skills. On the other hand, Mrs. Kubheka, Miss Msweli, Miss Mncanyana and Mr. Ndabezitha argued that CAPS principles were

designed to help educators in their subject and lesson planning. Both of these groups were correct in terms of understanding the functions of CAPS principles.

In subtheme A3, my observation was that all participants were confident when responding on CAPS principles which they usually consider in planning. All participants clearly indicated that they do consider active and critical thinking, integration and progression, high knowledge, high skills, credibility, quality and efficiency, human rights, inclusivity, environment and social justice, healthy environment, clarity and accessibility, progression and integration, applied competence and assessment.

In subtheme A4, participants had to explain and demonstrate how they use CAPS principles in their teaching practice. Participants explained that they give assignments to the learners, provide learners with projects, allow self-discovery by learners inside and outside the class, motivate learners, create learner-centeredness, give tasks to learners, allow learners to work in groups, and give class activities and homework. If what participants said was true, I have no doubt that the implementation of CAPS was according to the requirements.

I believe that any understanding of CAPS principles by the educator must be demonstrated in the classroom, through teaching practice. This was echoed by all participants in subtheme A5: they said that CAPS principles influenced them in such a way that it was then easy to identify relevant textbooks and teaching aids, to involve learners in their teaching, to understand assessment techniques, to address barriers in the classroom using various scientific strategies, to create healthy classroom environments and to make learners confident, independent, multi-skilled, respectful and able to participate in society activities.

In terms of the above main theme (theme A), all participants explained the purpose of CAPS principles in different ways, but what they had in common was that they all agreed that CAPS principles were about skills and knowledge. Although others believed that CAPS principles were guiding tools of how educators had to teach learners in class and how to prepare learners for their future, these participants mentioned that they used CAPS principles in their planning. Participants did not differ

from what they said about the purpose of the CAPS principles. They mentioned that their lesson plans and objectives were guided by CAPS principles.

What I observed was that most educators understood the role of activities in the classroom. I discovered that almost all the participants' work plans were in line with CAPS principles, and educators recommended the use of activities in classrooms. They also explained how they used CAPS principles in teaching and learning. Although participants' vision was common, I noticed that educators did not have clear reasons for using CAPS principles. I may say some educators understood that when facilitating in class, their presentations had to be in line with the components of the lesson plan; only a few educators did not teach according to their lesson plans. They sometimes deviate from what they have planned and concentrate on giving learners class activities and class work. This shows that some educators had difficulties in interpreting CAPS principles, or they lacked proper training.

4.3 Theme B: Training Programmes Received by Educators

From the interactions I had with the participants, it was evident that the training of educators involved different programmes catered for by the Department of Basic Education in South Africa. These programmes included Spelling Bee and Inclusive Education, just to mention a few – there are many more. Spelling Bee is part of Integrated National Literacy and Numeracy Strategy, and Inclusive Education aims to identify, assess and provide programmes for all learners who require additional support to enhance their participation and inclusion at schools. With regards to the training programmes received by educators before the implementation of CAPS, all participants revealed that they were trained and received workshops before the implementation of CAPS. Their comments are listed below.

Teacher: Miss Cricket

I attended different trainings like workshops, staff development and networking (B1). The training I received made me a better teacher, in such a way that I do my planning in a very professional way and do my assessment properly (B2).

Teacher: Mrs. Ballpoint

The workshops I received during the implementation of OBE helped me to understand the basic principles of NCS, then it was followed by the workshops and cluster workshops of CAPS in 2010 (B1). The training I received made me a better teacher, in such a way that I do my planning in a very professional way and do my assessment properly (B2).

Teacher: Mr. Mtshali

Several workshops conducted by subject advisors helped me a lot. School visits by subject advisors and the supply of relevant documents by them also contributed (B1). There is improvement in the way I deliver my lesson presentation, and the endpoint of the results is very good now (B2).

Teacher: Mr. Trigonometry

The training I received was workshops, cluster meetings and subject meetings (B1). I gained different teaching skills and I was also trained to tackle new topics (B2).

Teacher: Mrs. Kubheka

I have received training in the form of workshops that are conducted by subject advisors each year. These workshops are conducted at the beginning of the year (B1). Subject advisors give the best possible training and support in such a way that my practice has improved (B2).

Teacher: Mr. Mathunjwa

The training I attended was workshops only (B1). CAPS training made me understand what is expected from me as the facilitator as well as what the learners expected to do in terms of their learning (B2).

Teacher: Miss Msweli

I attended annual workshops which take a day or two in the beginning of each year and/or after each semester (B1). The training helped me to deliver the subject matter in class and be able to facilitate learners, but mostly workshops help me to improve my teaching skills (B2).

Teacher: Miss Mncanyana

I attended workshops offered before CAPS implementation, in-service training, and other workshops organised by the district together with subject advisors (B1). During training I received booklets from subject advisors, prepared booklets and hand-outs. These hand-out booklets present step by step how to go about teaching a particular theme in a subject. They also empowered me to accommodate learners during teaching, formal and informal assessment (B2).

Teacher: Mr. Ndabezitha

I attended different workshops about the implementation of CAPS (B1). These workshops have empowered me to teach learners to gain knowledge and skills, to be a responsible citizen, to be independent and to use different resources (B2).

4.3.1 Discussion of Findings

Educators' comments reveal that all educators received common training before the implementation of CAPS. The training of educators was done during school hours as well as late in the afternoons. The kinds of training received by educators included district workshops, in-service trainings and cluster workshops. The educators' responses revealed that workshops and in-service training were of high quality, although in some districts, educators complained about the period of training as well as the competence of facilitators in subjects like Natural Science, Economic and Management Sciences, Mathematics and Technology. According to the responses from participants, facilitators were training educators without using apparatus or resources prescribed by CAPS principles. Besides the abovementioned challenges, educators benefitted in terms of lesson planning, progression, teaching strategies, use of available resources and assessment techniques.

Evidence from participants suggest that in many cases subject advisors, or those who presented CAPS training at district level on their behalf, were knowledgeable or competent enough to do justice to the intended training. The content skills (Olivier 2013: 20-21) of facilitators seem to be much greater than the need to receive additional training on how to implement CAPS.

4.4 Theme C: Instructional Planning

In my interviews with participants it was revealed that a brief and clear description of instruction planning is what learners must know, be able to do, or understand as a result of successfully completing the learning plan. The categories of skills that learners must use or educators must teach can help learners to learn the language of CAPS skills. It is important to engage learners in understanding how they can apply the skills effectively. Instructional planning is the scheme of work which guides educators on how to plan their daily or weekly teaching (DBE, 2012: 7). The three most important instructional planning areas for Senior Phase (Grade 9) are assessment planning, strategic planning and classroom planning. This instructional planning also guides educators about the number of teaching hours per week in each subject. In most cases, educators believe that daily preparation for the subject defines instruction planning; however, good classroom instructional planning must be taken from the yearly planning and weekly planning. The guide for weekly instructional planning for the Senior Phase is shown in Table 4.5 below.

Table 4.4.0: Instructional Planning for Senior Phase

Subject	Hours
Home Language	5
First Additional Language	4
Mathematics	4.5
Natural Sciences	3
Social Sciences	3
Technology	2
Economic Management Sciences	2
Life Orientation	2
Creative Arts	2

TOTAL	27.5
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This theme demonstrates the understanding of instruction planning by educators at Senior Phase. What participants said about the instructional planning is shown below.

Teacher: Miss Cricket

After attending workshops my planning became better than before, it now meets entirely the requirements of the curriculum which now includes the assessment part (C1). If there are any challenges during my planning, networking with other educators and relevant subject advisors helps me (C2).

Teacher: Mrs. Ballpoint

My technological experience, knowledge and the empowerment received during my training make me to plan according to the CAPS requirements (C1). My first resource is the policy document, followed by different types of science textbooks, but if the problem persists then my last resort is to consult other educators from neighbouring schools who teach Natural Science at the same grade (C2).

Teacher: Mr. Mtshali

By using the available resources correctly, my planning does meet CAPS implementation requirements (C1). Subject advisors provide us with their cellphone numbers in order to contact them if we encounter problems. At school I contact other educators including my HoD, as well as to use the internet, different books and magazines (C2).

Teacher: Mr. Trigonometry

During my teaching using inclusivity method, my planning meets CAPS implementation requirements (C1). I use various practical and theoretical strategies

such as those included in the Department of Basic Education's guidelines for Inclusive Teaching and Learning (C2).

Teacher: Mrs. Kubheka

By stating different assessment criteria in my planning, CAPS implementation becomes a success (C1). My instructional planning always follows CAPS guidelines; if any problem arises, I consult my subject advisor telephonically (C2).

Teacher: Mr Mathunjwa

My programme design always includes assessment criteria at the end of each lesson (C1). I handle the challenges by having extra classes to cover the designed programme of assessment (C2).

Teacher: Miss Msweli

Through annual teaching plan, weekly planning and the aspects of the subject matter to be taught, my lesson plan becomes easy to design (C1). There are three types of instructional planning, namely course planning, unit planning and lesson planning, but for lesson planning I normally use the available resources to plan my lesson and also allow learners to research more information (C2).

Teacher: Miss Mncanyana

I usually design programme of assessment and annual teaching plan to make my CAPS implementation successful (C1). I consult my subject advisors and Head of Department (C2).

Teacher: Mr. Ndabezitha

During my planning I normally allocate time for group work and feedback from learners (C1). In case of challenges I consult subject advisors and Head of Department. I also use resources like internet, magazines and newspapers (C2).

4.4.1 Discussion of Findings

Findings in this theme revealed that most educators plan according to the requirements of CAPS, even though they sometimes experience challenges. The challenges are caused by environmental differences where instructional planning had to be adjusted in order to accommodate resources and other factors. Although participants pronounced that they benefitted from the training, I discovered that other educators were not sure what was expected from them during the implementation of CAPS. This was shown by the uncertainty of their responses. For example one educator said “In case of challenges I consult subject advisors and Head of Department”. This shows confusion about the implementation of CAPS. For an educator to stop the lesson and phone the subject advisor in the middle of the lesson presentation is a problem in itself. Educators must be trained perfectly in order to help themselves rather than having to rely on subject advisers’ help. This must be in line with what Wilson, Shulman and Richert (1987), cited in Harris and Hofer (2009: 2) say, describing pedagogical content knowledge as teaching knowledge based on the body of understanding, knowledge, skills, and dispositions, that a teacher needs to perform effectively in a given teaching situation.

4.5 Theme D: Educators’ Experiences in Curriculum Practices

Curriculum practice needs a competent and well-trained educator. In this theme participants demonstrated various responses about the teacher practice during the implementation of CAPS. Below is what participants explain as their experience of understanding curriculum practice.

Teacher: Miss Cricket

The language of teaching in the Senior Phase is English and it is hard to teach Mathematics in English without using IsiZulu which is the mother tongue of most of the learners in my school [D (i) 1]. Learners sometimes battle to understand the concepts in English whereas in IsiZulu learners understand content and instructions very easily since it is their mother tongue [D (i) 2]. I choose books with bright colours, written in big font size and having colourful pictures in order to attract the concentration of

learners [D (ii) 1]. Resources like real objects are very useful, learners become more interested to the lesson. Learners can also be able to search information and become encouraged to think critically and able to solve problems [D (ii) 2]. I ask for donations from different companies, do fundraising at school with help of other educators and buy some of the resources and organise the mobile library from the Department of Basic Education to come to my school and bring books requested by learners from the mobile library [D (ii) 3]. Lack of resources since the school does not have library, learner absenteeism and overcrowding of learners in classrooms are the major challenges [D (iii) 1]. During the lesson some learners do participate and become more actively involved, they ask questions and show interest during my teaching period, engage fully in the debate during class activities, but those who have weaknesses do not participate at all and seem to have no interest and engage themselves in other things rather than concentrate in lessons [D (iii) 2]. I ask them to form groups and divide them according to their strengths and weaknesses and also give them different activities according to their groups and concentrate on those who are left behind [D (iii) 3]. The current curriculum produces learners that are able to solve problems and make decisions using critical thinking, learners work effectively as individuals and as members of the team and also organise and manage themselves responsibly and effectively [D (iii) 4]. It makes a difference in teaching and learning due to the centeredness of learners which allows them to search information for themselves, and it also makes learners learn with understanding which allows learners to retrieve information themselves rather than rote learning [D (iii) 5]. Overcrowding of learners in classrooms is the cause of inconsistency, lack of space in the classrooms disturbs the normal teaching and learning as well as the group work, absenteeism and lack of resources [D (iii) 6].

Teacher: Mrs. Ballpoint

English is medium of instruction and sometimes learners may not understand instructions written in English [D (i) 1]. English plays an important role in teaching and learning since most of the books are written in it and it is easy for learners to understand most of the concepts [D (i) 2]. I compare the textbook content with the policy requirements in order to align them and also use other relevant resources listed in policy documents such as newspapers [D (ii) 1]. Sometimes they do meet the

requirements of CAPS depending on the availability of the prescribed resources [D (ii) 2]. I request learners to bring resources; if the resources are not equal to the number of learners in a class, I instruct learners to share resources [D (ii) 3]. Insufficient training lets us as educators not implement CAPS properly, and the lack of resources contributed to poor implementation of CAPS [D (iii) 1]. In most cases learners with no difficulties in lesson participate in class activities and those with difficulties keep quiet and sometimes put their hands on their mouths or just fold their arms [D (iii) 2]. Extra time is given to those with difficulties whilst the gifted ones are given other activities [D (iii) 3]. This curriculum prepares learners for job opportunities and it makes it easier for industries to employ school leavers, therefore, the country's economy increases [D (iii) 4]. There is no positive difference in CAPS except that it is an improved NCS because of minor changes where paperwork was reduced and assessment techniques were also improved [D (iii) 5]. Due to classroom overcrowding, educators do not have time to spend with less gifted learners or mark the activities of the learners [D (iii) 6].

Teacher: Mr Mtshali

English is the language of teaching and learning, and sometimes learners have difficulty in understanding it [D (i) 1]. Learners find it difficult to understand questions during tests and examinations and the result of that is failure [D (i) 2]. Resources are prescribed and recommended by the policy guide; for me it is to compromise with what resources are available at school or ask learners to bring resource models [D (ii) 1]. The resources I use are those prescribed by the curriculum but sometimes they do not meet the objective of the lesson [D (ii) 2]. As my school has a shortage of books, I compile notes for learners [D (ii) 3]. Educators did not receive enough training which resulted in the poor implementation of CAPS [D (iii) 1]. I have plus or minus 80 learners to teach in each class. Performance is only displayed in a written task. I only see the strength of those active learners but for the passive learners it is very difficult [D (iii) 2]. One of the ways to address these situations is to group learners but that needs close supervision. Another way is to give more written work. Those who are not performing well are given extra work and assistance [D (iii) 3]. This curriculum is more specific on what to teach and what learners must learn. Educators teach according to the curriculum policies [D (iii) 4]. This curriculum is learner-centred. Learners are required to research, which makes them independent, whereas group discussions

encourage interaction amongst themselves [D (iii) 5]. Sometimes learners do not cope due to environmental situations. Other learners are struggling as they are not exposed to resources like internet [D (iii) 6].

Teacher: Mr Trigonometry

The language of teaching and learning in my phase is English but sometimes learners are not clear of what is expected from them [D (i) 1]. The influence of English as a medium of instruction is negative to the understanding of the subject content in the side of learners [D (i) 2]. I identify relevant resources by reading policy documents and subject assessment guidelines [D (ii) 1]. Although my school has resources sometimes they do not meet the requirements of the curriculum implementation [D (ii) 2]. Sometimes I use my own money to buy teaching aids to ensure that teaching and learning take place [D (ii) 3]. Lack of resources like textbooks, calculators and science kits is a great challenge. Lack of infrastructure such as libraries and laboratories is also a challenge [D (iii) 1]. Strengths and weaknesses of learners are identified through formal and informal assessment [D (iii) 2]. I address the strengths and weaknesses of learners by giving class activities, homework and tests [D (iii) 3]. It addresses the inequalities brought by the apartheid education [D (iii) 4]. It provides clearer specifications of what is to be taught and learnt on a term by term basis [D (iii) 5]. Shortage and insufficient resources causes the inconsistency in terms of teaching and learning [D (iii) 6].

Teacher: Mrs. Kubheka

English is the medium of teaching and learning. Sometimes learners have difficulties and then they switch to IsiZulu [D (i) 1]. English suppresses learners' potentials and liberties to express them freely. It dulls the enthusiasm of young minds, inhibits their creativity and makes the learning unpleasant [D (i) 2]. I choose textbook that is in line with CAPS aims and core elements of the curriculum [D (ii) 1]. Unavailability of some resources such as internet and school library makes it difficult to implement CAPS [D (ii) 2]. I make copies for learners without books and also use internet to collect more information [D (ii) 3]. Training given to educators does not accommodate learners with

special educational needs. As educators we need training that is relevant to environmental contexts [D (iii) 1]. I identify strengths and weaknesses of learners by administering tests, written assessment, assignments and hands-on projects, group activities and presentations [D (iii) 2]. I group the ones with strengths together with the weak ones to make them work as a team [D (iii) 3]. The current curriculum policy decreases the workload of educators and ensures that there is clear guidance and consistency for educators when teaching [D (iii) 4]. It addresses the concerns about educators who were overburdened with administration, underperformance of learners, different interpretations of the curriculum requirements and complaints about the implementation of the NCS [D (iii) 5]. Processes of change are scarce and do not correspond with the reality of the educational context. Knowing the practice of educators when designing the curriculum could contribute to the implementation of new models of professional development and training [D (iii) 6].

Teacher: Mr Mathunjwa

English is the language of teaching and learning, for me it is good to use it as it integrates with other subjects [D (i) 1]. English teaches learners to communicate freely and understand other subject contents [D (i) 2]. I identify resources based on the subject assessments; it must be relevant to the programme of assessment [D (ii) 1]. This depends on the programme of assessment versus the selection of relevant resources, sometimes it meets the requirements and sometimes it does not meet the requirements [D (ii) 2]. If the chosen resource does not meet the objective, I use the teacher-centred methodological approach rather than the learner-centred method [D (ii) 3]. The language used was too complex; sometimes it confused us as educators [D (iii) 1]. Strengths and weaknesses of learners are identified by giving learners class activities [D (iii) 2]. I address the strengths and weakness by combining them, where bright learners are mixed with slow learners [D (iii) 3]. The current curriculum brought many changes in such a way that critical and learning outcomes were removed from the new curriculum [D (iii) 4]. The complex language has been reduced and now it's easy to understand what is required by the curriculum [D (iii) 5]. The lack of resources sometimes makes a gap between the curriculum policy and my practice [D (iii) 6].

Teacher: Miss Msweli

English is the language of teaching and learning, but I sometimes find myself being compelled to use IsiZulu to clarify missed points during English usage [D (i) 1]. The impact of using English is negative, because during examination times learners find it difficult to read questions written in English, or to understand and follow instructions since there is no assistance given during examinations [D (i) 2]. The main resource is textbooks; I start by comparing information of different textbooks written by different publishers, than I Google internet information to expand my knowledge, use charts, pictures and study guides [D (ii) 1]. The use of internet to research different resources helps me to get relevant resources for my topic [D (ii) 2]. I rely on making photocopies for learners and the use of internet [D (ii) 3]. I did not get enough training for the curriculum implementation, as a result I make mistakes due to lack of knowledge [D (iii) 1]. Informal assessment is the better tool which helps me to identify learners' strengths and weaknesses [D (iii) 2]. When giving learners group tasks, I mix learners with better strengths on creativity together with weak ones so that they can help each other. Extra classes, remedial classes, class work and homework are also essential to address these challenges [D (iii) 3]. It is more specific on what to teach and how to teach it. I do not teach what I want but what is expected from me, the attention is on what the learner must know at the end of the lesson [D (iii) 4]. This curriculum is learner-centred. Learners become independent which prepares them to be proper and responsible adulthoods. For me as a teacher is to facilitate and interact with them [D (iii) 5]. Inconsistency is caused by accommodating learners according to the environment where they live; learners come from different environments with different and unique resources which cannot be applicable to all schools in South Africa [D (iii) 6].

Teacher: Miss Mncanyana

English is the prescribed language of teaching and learning, but sometimes if I feel that learners do not understand the subject content, I turn to use IsiZulu for clarification purposes [D (i) 1]. The influence of English is twofold, on the positive side it helps learners to communicate with other races like whites and Indians, but the negative side is that some of the learners do not pass their exams due to the language barrier [D (i) 2]. I start with textbooks and compare them, and then choose the best explanatory textbook. From there I refer to policy guide and choose the resources

recommended by CAPS policy guide [D (ii) 1]. All the resources recommended by policy guides do meet the curriculum implementation [D (ii) 2]. I usually request learners to bring resources and I download others using my personal internet [D (ii) 3]. I did not get proper training. The confusion I had, resulted in improper implementation of CAPS at my school [D (iii) 1]. Any learner who struggles to cope in class or does not participate in all activities, whereas gifted learners dominate in group discussions as well as in class participation, that learner has a problem [D (iii) 2]. I mix less gifted and more gifted learners in group activities so that the ones with good strengths help the ones with poor strengths [D (iii) 3]. The current policy changes educators from traditional teaching and shapes them into democratic teaching, where teaching and learning of the child is centeredness, not only what the teacher says [D (iii) 4]. Learners can investigate and discover new things without the help of educators. Their self-discovery skills are enhanced. The learners' intellectual thinking has improved since the introduction of CAPS [D (iii) 5]. The environmental problems, lack of resources and overcrowding in classroom are the major challenges in terms of consistencies and educator daily practice [D (iii) 6].

Teacher: Mr Ndabezitha

I use English and I view it as the language which needs to be used together with IsiZulu in order for learners to understand the subject content [D (i) 1]. English helps learners to understand other subjects easily since most of other content subjects are written in English [D (i) 2]. The policy document helps me to select relevant resources [D (ii) 1]. My resources do meet the requirements of CAPS; the evidence of this is that most of my learners pass my subject with high marks [D (ii) 2]. I request my principal to order resources that are not available at school. I also request other educators whose subject policy prescribed resources similar to my subject policy [D (ii) 3]. The overcrowding of classrooms makes me not focus attentively on strengths and weaknesses of my learners [D (iii) 1]. As I had mentioned before, it is difficult to identify a learner with weakness due to overcrowding, but those who happened to be identified are mixed with the ones with strengths [D (iii) 2]. I give extra work and prepare another lesson that can accommodate all of them. I also co-opt the gifted learners to assist me by helping the weak learners. And I also give slow learners a second chance to redo the same work whereas the gifted learners are given another challenging task [D (iii)

3]. By setting the learning outcomes be achieved at the end of the education process, this curriculum policy shapes teaching and learning in a way that learners can reach their maximum learning potential [D (iii) 4]. There is less work for educators and learners can do peer-assessment and self-assessment. Theory and practice is now combined to make simpler understanding of learning [D (iii) 5]. The inconsistency between curriculum and practice happens when the intended stipulated curriculum objective is not achieved at the end of the lesson. Sometimes learners are not doing what they are supposed to do. In most cases learners struggle to do the work given to them [D (iii) 6].

4.5.1 Discussion of Findings

Through the semi-structured interviews conducted in six schools, where nine respondents of the target population were interviewed, the researcher could establish that learners need to start to be bilingual from the primary school stage of their education. This makes code-switching and code-mixing manifest in the child's linguistic performance right from an early age. However, English language educators must come out with a plan to prevent the demerits of code-switching and code-mixing from affecting the mother tongue of the learner. In this study all participants had common views about the language of teaching and learning at Senior Phase (Grade 9). They agreed that it helps learners to understand other subjects easily as they are written in English. My observation was that educators differ when it comes to language of instruction; some believe that IsiZulu must be used as a medium of instruction, whereas others argue that it must be used for clarification. Interestingly, they all accept that English is a prescribed language for facilitating CAPS principles.

Although I agree with the participants, to me it is not about the language issue, it is about the training of educators. The experience of the educator assists in unlocking the problems. This is also the view of Park (2008: 309) who contends that "learning experience is a state of key meaningful knowledge which is constructed by each person with one's own direct experience, not someone else's experience abstracted and condensed into text-book forms". Although the use of English in teaching and learning is recommended by most participants, in other schools, it impacts negatively on the teaching and learning process. This is also confirmed by Brown (1982: 19) in his study when he said "curriculum can be a great success if it is correctly used or

dismal failure if wrongly used". This depends on how it is used by educators as individuals or how instructional materials are used by educators in teaching and learning. I disagree with the statement; my opinion is that all schools must be equal and training of educators must be of a high standard.

In terms of strengths and weaknesses of learners, I concur with most of the educators' suggestions. If the learners had been identified as weak learners, more work must be given to those learners; similarly, in the case of learners with good strengths, they must be given more challenging activities so that they are not bored. As Russell (1997: 248) says, "curriculum materials must be developed carefully and the extended work for other learners must be planned by educators". I also suggest that the challenges posed by participants need to be addressed by the DBE. Our country is more than 20 years into democracy; it is no longer an excuse to blame the roots of apartheid.

When assessing learners, assessment must be used as a positive measuring tool and not the centre of instructional planning (McCreary, 2005: 5). The best way to find if the planned assessment does work is to conduct research and test out strategies in the classroom. I agree with the methodological approaches used by some of the educators, for example to group bright learners with slow learners so that the former can help the latter. This will help to produce learners that are able to solve problems and make decisions using critical thinking, effective working as individuals or as members of a team, organising and managing themselves responsibly and effectively. It is true that the designed CAPS policies can sharpen the learners to be ready for the work environment if correctly used, but this also depends on the availability of resources at schools.

4.6 Theme E: Assessment of Learners

The understanding and definition of assessment is quite explicit. What the participants were saying explains what is on the CAPS documents. Huba and Freed (2000: 3) describe assessment as the process of gathering and discussing information from multiple and diverse sources in order to develop a deep understanding of what learners know, understand, and can do with their knowledge as a result of their educational experiences. In terms of planning and assessing learners, participants' had their own views as shown in the following discussions.

Teacher: Miss Cricket

Assessment is a process of collecting information from learners to assist educators in making decisions about the progress of learners (E1). I prepare tasks for my learners where the number of tasks depends on a particular subject per quarter (E2). Knowledge and skills are being assessed; classroom assessment is done every day informally and formally, whereas informal assessment builds towards formal assessment and formal assessment assesses the progression of a learner in a particular subject (E3). Checklist is used to list all the areas the teacher wants to assess, tasks are given to the learner and the number of tasks depends on a particular subject, assignments are given every Friday and learner performances are recorded (E4). These assessment strategies are in line with the policies of the National Curriculum Statement and therefore they are relevant (E5).

Teacher: Mrs. Ballpoint

Assessment is a continuous planned process of identifying; gathering and interpreting information about the performance of learners using various tools (E1). I prepare activities, tests or examinations for learners at the end of the subject content (E2). I use class activities which may be used to measure learner performance and opportunities for learners to demonstrate skills, knowledge, values and attitudes (E3). Portfolios are used as evidence and previous question papers consisting of different cognitive levels (E4). They help me as the educator to see whether I have achieved my goals, also to diagnose learners' problems and deal with those who need more attention (E5).

Teacher: Mr. Mtshali

Assessment is a tool which is used by educators at schools to test whether learning and teaching has been successful. There is formal and informal assessment, where formal assessment occurs in the classroom to indicate the learner achievement, and the informal assessment occurs outside the classroom (E1). I normally formulate the assessment criteria before the assessment process takes place; for example, knowledge testing or skills testing (E2). Some of the assessments are conducted orally and some are given as written work, for example homework, class work, assignments,

tests, worksheets and projects (E3). Written work of learners is collected and marked by myself or marked by learners but learners swap their exercise books so that they do not mark their own work. Answers are written on the board (E4). They are relevant because they are prescribed by the Department of Basic Education and these assessment strategies and tools make it easy to deal with large numbers in my classroom (E5).

Teacher: Mr. Trigonometry

Assessment is a tool that is used to find out what the learners know. It is also the integral part of learning and teaching through formal and informal testing (E1). My planning always shows types of assessment, date of assessment, duration of assessment and cognitive levels (E2). I use class work, homework, test, assignments, investigations, projects, memorandum, rubrics, research and examinations as assessment strategies (E3). I often make copies of all tasks and distribute them to learners. Use memorandum and rubrics to mark learners' work (E4). I set the assessment strategies and tools using the previous examinations so that they are relevant to the curriculum (E5).

Teacher: Mrs. Kubheka

Assessment is the process of gathering and discussing information from multiple and diverse sources in order to develop a deep understanding of what learners know, understand and can do with their knowledge as a result of their educational experiences or as the result of the process culminating when test results are used to improve subsequent learning (E1). During my planning I always consider why assessing learners, what to assess and how to assess it (E2). I use class tests, assignments, peer assessment, group activities, projects, class presentation, class debates and class discussions (E3). Class tests allow learners to fully demonstrate what learners know by answering short questions, multiple-choice, true/false and essay questions. Class presentation assesses oral skills and understanding of the content. Project assesses learners' creations or innovations. Group activity assesses interpersonal, communication and collaborative skills. Peer assessment creates a

classroom environment that boosts learners' confidence when given the chance to mark their peers' work (E4). The assessment strategies and tools I use are prescribed by the Department of Basic Education, not that every educator designs the tools or strategies. They are relevant because they are there on the policy document (E5).

Teacher: Mr. Mathunjwa

Assessment refers to the activities given to the learners to test whether the objectives of the lesson have been achieved (E1). Every end of the lesson I assess learners. This can be done through formal or informal assessment (E2). I use control tests, assignments, research tasks, projects and examinations (E3). Control tests are used without notes or books, assignments are the self-discovery knowledge resulting from the combination of different books and research, research is similar to assignments but it is the discovery of new knowledge, and a project is a given task which has a specific period of completion (E4). These strategies depend on the effective use of resources and the understanding of subject content by the learners (E5).

Teacher: Miss Msweli

Assessment is the tool which is used to weigh knowledge and level of understanding of learners in schools. Assessment assists educators to make them aware of what learners know in order to do remedial work. Assessment is formal and sometimes informal (E1). I prepare assessment by collecting different notes and from those notes I then design short and long questions, depending on what I want to achieve from learners (E2). I use group work and individual tools to assess my learners. Sometimes assessment is conducted orally but most of the time I give learners written work (E3). Learners exchange their exercise books so that they do not mark their own work. Memorandum of what is assessed is written by me on the board and the learners refer to it and mark their peer exercise books using pencils (E4). These assessment strategies and tools are prescribed by the Department of Basic Education, therefore these tools are very much relevant to this curriculum and they also work very well and help me a lot (E5).

Teacher: Miss Mncanyana

Assessment is measurement and evaluation of learners in terms of what they know and what they do not know. This is done through class work, tests, assignments, activities and examinations (E1). Every end of the lesson, chapter, quarterly, half-yearly or year-end learners are to be assessed in order to see that the objective of teaching and learning has been achieved (E2). Class activities, testing, homework, assignments, worksheets and examinations are the assessment strategies and tools I use to collect evidence of learners' learning (E3). After assessment and marking of exercise books I give the chance to learners to analyse and correct their mistakes. I also open an opportunity for questions and clarity in terms of what has been assessed. Lastly I do sign learners' exercise books after corrections. This gives me a chance for the evaluation of learners' understanding (E4). These tools and strategies have been researched by subject and policy experts, therefore, I have no doubt that if the educator use them correctly and effectively they are relevant to unlock the minds of our learners (E5).

Teacher: Mr. Ndabezitha

The concept assessment ensures that after learning has taken place, learners have to be tested to make sure that they have understood what they had to know during teaching and learning. Educators are to monitor testing and evaluation in order to record the progress of learners (E1). When planning assessment I use cognitive levels to enter marks for learners. These levels are based on knowledge recall listed in a low order. There are those on the middle order where learners have to apply skills, understanding, diagnostic and strategic. High order questions are those questions where learners have to analyse, interpret, synthesise, create and evaluate (E2). I use homework, class work, projects, assignments, tests, discussions, worksheets, and charts for tasks such as posters (E3). After teaching has taken place, I give learners homework to apply the knowledge gained during teaching and learning. Class work is given before the end of the period. I also give them assignments, projects and charts for posters with due dates. Where there is a lot of evidence to be collected I refer learners to use different resources such as newspapers and internet. Worksheets are

given to them as class work and discussions are done during lesson presentation (E4). Its relevance is seen when learners bring solutions within their groups. This is helpful because the integration of subjects like Technology and Natural Science happens unintentionally and the combination of gifted learners together with less gifted or disabled learners bring inclusivity in the class (E5).

4.6.1 Discussion of Findings

In this theme the understanding of assessment by participants is explained in different ways. This shows that educators have different understandings about assessment strategies and tools. In the above explanations participants like Mr. Mtshali and Mr. Trigonometry had common understandings of assessment. They agreed that assessment is a tool which is used by educators to test whether teaching and learning took place. They further stated that it can be formal or informal. This is in line with Gardiner (2016: 109) who explains that educational assessment seeks to determine how well learners are learning and how the integral part of the quest improved education. He further argued that assessment provides feedback to learners, educators, parents, policy-makers, and the public about the effectiveness of educational services.

In terms of planning assessment, participants were not clear about the question. The question wanted them to explain the way they plan their assessment, but most of the participants were giving answers such as “I plan assessment formally and informal”. I agree with Miss Msweli when she said “I prepare assessment by collecting different notes and from those notes I design short and long questions, depending on what I want to achieve from learners”. Another question that participants had to respond to was strategies and tools they use when assessing learners. In this section, different responses came out. The most appropriate answers according to CAPS requirements were from Mrs. Ballpoint, Mr. Mtshali, Mr. Trigonometry, Mrs. Kubheka, Mr. Mathunjwa, Miss Mncanyana and Mr. Ndabezitha. These participants specified that they were using strategies and tools like activities, class work, homework, assignments, worksheets, projects and tests to collect evidence from learners. Most participants agreed that tools such as written work were marked by educators or learners. A memorandum and rubrics were used for marking. The evidence supplied

by participants showed that the strategies and tools used by educators were relevant for CAPS.

4.7 Theme F: Miscellaneous Issues

In this theme, participants had to discuss different issues about CAPS implementation. The researcher related the findings of this study to another study carried out in Kenya. Otieno (2010: 126) discovered that in Kenya, educators were trained in such a way that they had clear goals on how to guide their teaching, but the problem was that good teaching and learning materials seemed not to be available in most Mathematics lessons. As a result, there was a public outcry about poor performance in Mathematics at secondary schools. The South African situation is not that different from Kenya. The challenges relating to curriculum implementation according to the participants in this study are given.

Teacher: Miss Cricket

Overcrowding of learners in classrooms, too much work and less time, learners too slow to finish work and too much paperwork (F1). Both CAPS and National Curriculum Statement are learner-centred, and they provide access to higher education, the minimum standards of knowledge and skills are to be achieved and they both discourage rote learning (F2). I can improve teaching and learning by promoting reading of books and newspapers to the whole school in order for learners to be acquainted to the use of English language in content subjects (F3).

Teacher: Mrs. Ballpoint

Shortage of books, insufficient resources for practical work, and unavailability of computers to access internet were part of the problems (F1). CAPS is similar to NCS but it is little bit improved because it involves National Protocol Assessment and reduces too much paperwork (F2). I will give extra lessons and activities to learners

who adapt slowly to ensure that they do capture in order to be promoted by year end (F3).

Teacher: Mr. Mtshali

Learners are not motivated to learn, they do not understand English whereas many subjects are written and taught in English. Things like libraries, internet café are far from school. There is also a shortage of books and we as educators need proper training (F1). The subject matter is still the same; the difference is that in CAPS there are no critical outcomes, specific outcomes or learning outcomes (F2). The first thing is to find the way of motivating learners, second is the reduction of learner-teacher ratio from 80 learners in a class to a reasonable and controllable number. Lastly learners must be supplied with proper textbooks, libraries, laboratories to be built in schools as well as computer labs (F3).

Teacher: Mr. Trigonometry

The major challenges I experience are lack of resources, e.g. textbooks, stationery, library and laboratory (F1). CAPS is clearer as compared to National Curriculum Statement, I know exactly what is expected from me to teach the subject topic (F2). I need support from SGB, school management team, subject advisors and parents in order to improve teaching and learning (F3).

Teacher: Mrs. Kubheka

It is very difficult to implement CAPS successfully since the funding is limited by this education system. Since the economy of the country is bad, CAPS implementation is also unsuccessful. The number of learners and educators kept on increasing but education budget is less compared to the increase of educator-learner ratio. Unavailability of sufficient facilities and equipment like classrooms, libraries, resource centres, furniture, and school buildings make it difficult to implement CAPS (F1). CAPS is a changed curriculum not methodological change. CAPS is now written in content format rather than the outcomes format; it is more prone to traditional teacher methods rather than OBE methods (F2). Classroom policy must be added to the existing policies of CAPS. Classroom practice emerges from a desire to learn. Policy-makers are not

deliberately creating policies that are unreasonable, unworkable or unnecessary but they need the views of us as educators, both urban and rural educators. The reality is that classrooms are now uncontrollable due to the policies made by people who are not educators. There is nothing currently within my control as a classroom teacher (F3).

Teacher: Mr. Mathunjwa

Other problems are the use of elementary content, real life context, unfamiliar problems, communication, decision making by officials, integration of content with skills and insufficient training of educators (F1).CAPS are clearer than NCS since paperwork has been reduced and difficult terminologies have been eliminated (F2). If I can be given more time to attend workshops and also be combined with educators from advantaged schools, I can share my problems with them (F3).

Teacher: Miss Msweli

Lack of training for educators, yet we are expected to do our best when teaching learners. It is hard to teach something that you are still learning yourself. I wish educators would be trained thoroughly before the implementation of any new curriculum (F1). The information is still the same; the only change is the time frame and the alignment of modules (F2). If I can be given such an opportunity, firstly I will reduce the number of learners per class and build more classrooms for those schools with high enrolment. Make it a must that all schools must use technological equipment like projectors, computers and internet during teaching and learning. Lastly, textbooks must be replaced with downloaded books through internet (F3).

Teacher: Miss Mncanyana

Like most of educators here at school, the lack of resources and poor training during the implementation of CAPS are the major challenges we all experience as educators of this century (F1). There is no much difference between the two, except that NCS had too much paperwork, whereas CAPS is a revised NCS where some of terminologies have been eliminated and assessment tools were added (F2). I suggest that before a curriculum is changed, all relevant stakeholders must have input, not

certain individuals like educators' unions who are given chance to suggest what must be added, but all subject educators must make submissions to the task team (F3).

Teacher: Mr. Ndabezitha

As my school is in a deep rural area, there are no libraries, internet café, books are scarce, and the problem of communication with learners due to new terminologies brought by new curriculum and the poor training I receive during pre-implementation phase (F1). CAPS is designed as a single comprehensive policy document developed for each subject to replace subject statements, learning programme guidelines and subject assessment guidelines in Grades R-12. There are no critical outcomes, specific outcomes and learning outcomes as was the case in NCS (F2). I can contribute to the improvement of teaching and learning by consulting subject advisors, subject specialists and my HoDs, by using available resources at my school and within the community, by creating a conducive learning environment, by getting support material from my principal and Department of Basic Education, by attending subject cluster meeting, and by planning my subject using available resources in line with the subject matter (F3).

4.7.1 Discussion of Findings

The findings in this theme show that participants had different ways of solving the problems relating to CAPS implementation. In subtheme F1, participants mentioned different challenges like a shortage of books, computers, internet and libraries, insufficient training of educators and classroom overcrowding. Participants viewed CAPS as an extension or improved NCS. Participants like Mr. Mathunjwa and Miss Mncanyana quoted the reduction of paperwork and elimination of difficult terminologies like range statements. To improve teaching and learning participants believed that the strategies and tools acquired during pre-implementation of CAPS can be valuable in teaching and learning.

Teaching and learning of CAPS can be improved in several ways, depending on the capability of the educators. There is no fixed method to use in order to improve the teaching capability. Different styles of teaching and learning can be applied. In Gambia for instance, the government introduced an in-service qualification programme which

included face-to-face instruction (Shrestha, 2014: 4). Training of educators occurred during school holidays with open and distance learning and mentoring of educators during school terms for a period of three years. To sum up my findings, in this theme, participants are clear about the ways of improving the implementation of CAPS in their teaching and learning situations.

4.8 Conclusion

During interviews, participants from different schools commented in similar ways. The repetition of similar answers by different participants proved to me that the instrument I used was valid for the purpose of this study. The instrument I used to interview participants did not disappoint me – it was suitable and reliable. There are so many instances where respondents gave answers in a similar way, although they are teaching in different schools and different districts. For example, Miss Cricket and Mrs. Ballpoint gave a similar response about lack of resources, although they are teaching in different schools. This is in line with Joppe (2000), cited in Golafshani (2003: 598), where he explained that the extent to which results from different participants are the same, consistent and accurate time and again through the representation of the total population under study is referred to as reliability. If the results of a study can be reproduced using a similar methodology then the research instrument is considered to be reliable.

In conclusion, during interviews, this study produced similar results from different participants; therefore, this study is valid and reliable.

CHAPTER FIVE

DISCUSSION OF FINDINGS, LIMITATIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter provides a synthesis of the findings, limitations and recommendations that emerged from this study undertaken to investigate conceptualization of the implementation of CAPS in the Province of KZN by (Grade 9) Senior Phase educators.

5.2 DISCUSSION OF FINDINGS AS PER THEMES

The process of change caused confusion among educators at school level. According to Khumalo (2014: 22), the responsibility of making CAPS to succeed was the duty of post level one educators, HoDs, deputy principals and principals. Since the change in South African curriculum was politically motivated, the researcher's suggestion is that as per the theoretical framework in Chapter two, the social constructivism theory is relevant to analysis of teaching and learning of CAPS at schools. In CAPS, teaching is mainly informed by the ideology of social activities, which is similar to social constructivism. This suggestion is supported by Kim (2015: 2-3) in his explanation of social constructivism.

5.2.1 Theme A: Principles of CAPS

In terms of the understanding of curriculum principles, the researcher discovered that most participants were citing principles exactly as they are written in the CAPS document. The researcher was satisfied that participants were knowledgeable about the CAPS principles. In a country like New Zealand, educators that are not enacting the principles of the New Zealand Curriculum (Education Review Office 2012: 3) are unlikely to be successful in accelerating the progress of learners. In this study, educators left the researcher in doubt as to whether they were following CAPS principles which assist learners and the school as a whole in practice, evaluation and improvements of the curriculum. The curriculum principles are about the knowledge, skills and understanding required in each subject as well as the standard targets for each subject which enables educators to plan for individual learners' learning needs, whilst adhering to the principles of inclusion, learning challenges, learners' different

needs and preventing barriers to learning and assessment (Rose, 2010: 9). The fact that the participants were narrating CAPS principles to the researcher shows that training of educators took place in the Province of KZN. The problem may lie in contextual differences, as the CAPS policy emphasizes the use of resources during facilitation.

In this theme, participants had different views about CAPS principles. Some participants believe that CAPS principles are for articulating the activities in order to achieve the learning goals and objectives. Others believe that CAPS principles are designed to guide educators in order to achieve the objective of teaching and learning. This shows that educators' understanding of CAPS principles is not the same as their environmental factors, such as lack of resources. The argument made by Wong (2014: 26) is that curriculum principles are for outlining the objectives of the educational programme, as well as how the educational programmes should be organised.

In this study, findings revealed that all educators were using prescribed principles in their planning, but in different ways. This means that the objective of this study to test how secondary school Senior Phase educators understand the meaning of CAPS principles in their own practice has been achieved. This was observed by the researcher of this study during the interviews. During the interviews, participants stated that they were using methods like activities, experiments and many more. This is according to the guidelines of the CAPS document. The experience they obtained through workshops and training is reflected in their practice. The D&T National Curriculum for England (2014: 2) states that curriculum implementation can be effective even though educators differ when it comes to consideration of curriculum principles. In addition to the above, Lunenburg (2011: 1) also suggested that the objectives, content or subject matter and learning experiences must be considered during planning. Failure to implement the above suggestions can result in the poor performance of learners, especially at Senior Phase level.

According to the researcher, the planning requirements were inculcated into participants. They were using critical thinking, analysis and problem-solving skills during their teaching practice. This was also coupled with the mixing of assessment strategies, which cannot be separated from the support materials as per CAPS policy requirements. Their practice was supported by the view of Magrini (2009: 2), who

argues that educators' knowledge together with the valuation of certain forms of knowledge relate directly to educators' understanding of learners' potential for intellectual, emotional, and social development. By having a clear understanding of what to do and which textbooks or other teaching and learning materials to use, participants' problems when preparing lesson plans and subject content were reduced, and that helped them to design the assessment questions.

5.2.2 Theme B: Training programmes received by educators

This study reveals that all participants attended workshops and in-service training. The training of educators was useful and helpful to them, as mentioned by the participants during interviews. Although participants echoed the usefulness of workshops, they cited that the period of training was not sufficient. I believe that for any curriculum to be successfully implemented, educators must receive training first. In this theme, most educators revealed that they attended workshops and training for the implementation of CAPS. Based on the information revealed in the participants' responses, they attended workshops, in-service training and cluster meetings during the pre-implementation of CAPS. This was good for the implementation of CAPS, as UNESCO (1993: 3) pointed out that workshops help educators to review and analyse practices in the design, implementation and evaluation of curriculum, particularly in the development of a competency-based curriculum, and in facilitation of exchange of experiences among the participants which identify common trends and successful practices. The researcher's suggestion is that educators must possess a Bachelor of Education degree as a prerequisite before being allowed to attend workshops and in-service training in order to implement CAPS successfully.

As participants confirmed, the training received by educators was for improving the level of teaching, since they were using different traditional approaches before the introduction of the new curriculum. As the theory of practice encourages the empowerment and involvement of educators in the curriculum development process, educators must not be blamed when turning to their ways of traditional teaching. Empowerment is the process of development and growth through which a person undertakes to take independent decisions and to act autonomously and independently with a view of making a contribution towards the development of a particular environment (Carl, 2009: 2-7). The researcher's opinion is that if the DBE wants CAPS

to be successful, training of educators should be coupled with skills, attitudes and knowledge within a positive and democratic climate. It is also true that if the process had been followed correctly then educators would be regarded as professionals, as they would be able to make contributions towards change using the power of knowledge.

5.2.3 Theme C: Instructional planning

Educators are individuals and therefore their planning will not be the same, although it is expected to be similar. The instructional planning of teaching and learning is the reflection of how educators understand curriculum principles and policies. The different strategies employed by educators in planning of the subject matter are the key symbols which show that there is no common understanding in terms of planning. Others are guided by the resources prescribed by policy documents, especially educators at advantaged schools, and others are guided by the books (i.e. those educators at disadvantaged schools). How challenges were handled by other educators in certain instances determine whether the implementation of CAPS was a success or not.

The researcher was told that after attending workshops and the inclusion of assessment tools in testing of learners, the planning of subject matter became better in terms of using available resources, and the teaching and learning improved because learner pass percentage was increased. It is understandable that the participants used the resources prescribed by the CAPS policy document; the question is whether that means the improvement of teaching practice and the success of CAPS implementation. The statement made by one participant that the planning was meeting CAPS requirements as learners were working in groups without any facilitation is unacceptable to the researcher, as it is not supported. However, in other schools the researcher observed that the effective instructional planning of educators had developed learners' skills of collecting, analysing, organising and evaluating information gathered by learners themselves. The issue of subject advisors providing educators with their cell phone numbers in order that they may contact them if they encounter problems is not the correct way of helping educators. Subject advisors must arrange proper meetings with educators to discuss problems of curriculum implementation.

It is true that beyond planning and preparation of materials, effective organisation of instruction involves the development of a conscious orientation towards teaching and learning. As the central focus of classroom activity, teaching and learning must be consistently communicated to learners in the classroom (Stronge, 2007: 9). In subjects like Technology, Al-Bataineh (2003: 480) recommended that one way for educators to meet the challenges of skillfully and effectively using Technology for learning is to be knowledgeable about evaluating Technology resources. He further said that it is advisable for district officials to offer resources to streamline the software review process for the classroom teacher. Educators must use computer specialists or coordinators who can research and make appropriate recommendations.

Although other participants recommended the use of resources like the internet, magazines and newspapers, there are other resources which may be useful, like models and local natural resources. The idea of Al-Bataineh (2003: 481) is also the best way for educators to meet the demands of transition for the future and to reflect upon the lessons learned in previous years, but educators must be role-models by staying abreast of technology innovations and by demonstrating habits of lifelong learning.

5.2.4 Theme D: Educators' experiences with curriculum practices

The issue of language is very sensitive in SA. There are those people who want to preserve their language and culture, and those who want to use English and mix it with isiZulu. The comments of participants in this study make it clear that black educators are not keen to use English as a medium of instruction. During interviews, the language of teaching in the Senior Phase, which is English, was mentioned as an official language of teaching, and it was reported that it is hard to teach Mathematics in English without using isiZulu, which is the mother tongue of black learners in most schools in the Province of KZN. Participants raised concerns about the use of English which is sometimes not understood by learners during formal testing and examinations.

The concerns were about the fact that books and assessment questions are written in English, and therefore the language of teaching and learning in Senior Phase must be English; however, other educators sometimes switch to isiZulu to explain difficult

concepts written in English. This shows what Buthelezi (2013), cited in Cook (2013: 5) stated, that a shift is needed in the attitudes of parents and educators in order to develop and promote teaching in mother tongue languages at schools in SA. Buthelezi pointed out that implementing the Language of Learning and Teaching (LOLT) policy had been slow at Senior Phase classes. She cited that the perception that children are of a higher status if admitted to schools where the LOLT is English is wrong, and must be corrected. Although resources are limited in black schools, they have skilled educators to teach mother tongue languages. The language policy permits SGBs to decide about the language they want to use at their schools (DoE, 2004). School principals must not encourage parents to promote English as the LOLT. Furthermore, SGBs need to change their attitudes towards teaching in mother tongue. Lastly, the DoE must enforce the language policy in order to prevent problems in schools.

In this study, all interviewed participants cited that the LOLT they use at Senior Phase is English. They mentioned reasons such as lack of content books written in the mother tongue. It is clear that educators do not follow the language policy as cited above. Although educators make clarifications by using isiZulu, it is not sufficient to do that since educators are not translating sentence by sentence.

In terms of identification of resources, participants had different views. All participants agree that CAPS policy documents guide them to choose resources. This means that educators use policy guidelines to align subjects' content with resources listed in policy document. Such resources are newspapers, the internet and so on. They also use resources available at schools or ask learners to bring resource models from their communities.

Although some participants cited difficulties of getting resources relevant to their subjects, they improvised with whatever was available at their schools. However, the question may be whether available resources meet curriculum requirements or not. Some participants' responses were not clear; for example, one participant said resources are relevant because they are prescribed by CAPS policy documents. This shows that educators do understand curriculum policies. Although examinations or tests were for evaluation purposes, feedback does not prove the effective use of resources by educators. This is supported by participants' views in terms of management of resources. To ask for donations is not a permanent solution to

minimise challenges. The DBE must provide permanent solutions to minimise resource challenges. The failure of the DBE is also mentioned by Abdullar (2009: 2), where he raises fundamental issues regarding human resources. Abdullar complains about the lack of capabilities and intellectual abilities which are not grounded in the levels of education and technical training. Another factor raised by the participants was the training of educators; most participants raised concerns about training of educators, more especially the workshops conducted by DBE officials. This shows that DBE facilitators were not competent enough to clarify certain concepts.

Responding to identification of strengths and weaknesses, participants suggested that slow learners must be given more time to correct mistakes whilst gifted learners are busy with extra activities. This is the view of Al-Bataineh (2003), who also cites many challenges facing gifted learners who need to be treated and taught using separate, accelerated methodology and pedagogy. He also suggests that Technology educators need to receive adequate ongoing training in order to match the curriculum philosophy and theory of learning. This suggests that adequate numbers of computers must be located in each and every classroom.

In my opinion, the current curriculum has made a difference in terms of our education system in SA, although there are still gaps that need further investigation. The inconsistency between the curriculum policy and the daily practice of educators requires further training of educators.

5.2.5 Theme E: Assessment of learners

All participants indicated that they give tests, examinations, activities and assignments when assessing learners. Most of the participants however, raised concerns about the high failure rate of learners. They mentioned overcrowding of classrooms as one of the causes of low achievement. As mentioned above, educators believe that assessment is the testing and writing of examinations by learners. The understandings of Mr. Trigonometry and Mr. Mtshali in terms of assessment were very similar. Mr. Mtshali believes that assessment is a tool which is used by educators at schools to test whether learning and teaching has been successful, whilst Mr. Trigonometry describes assessment as a tool that is used to find out what the learners know. So these participants explain assessment in a similar way although their wording is not

exactly the same. Similarly, both Mrs. Ballpoint and Mrs. Kubheka define assessment as a process where learners are required to prove that they did learn what they were taught by educators or what they discovered through research. This common thinking of participants indicates that the educators received the same training.

There was no doubt that most educators were clear about the assessment tools, although they used them differently to achieve their own peculiar objectives. More examples of this are quoted from some of the participants whose understanding was that assessment is a process of collecting information from learners to assist educators in making decisions about the progress of learners. Other participants have a different view: they believe that assessment is a continuous planned process of identifying, gathering and interpreting information about the performance of learners using various tools. There is no much difference from what the first participants said, but one of the participants added that assessment is an integral part of learning and teaching through formal and informal testing. However, most of participants emphasized testing. In fact, there is formal and informal testing or assessment, where formal assessment occurs in the classroom to indicate the learner's achievement and adequate evidence of understanding. This testing or form of evaluation is achieved by using various forms of assessment, for example activities, oral work, and so on.

In planning of assessment, educators indicated their own understanding of assessment tools, but each explained it as a tool which is used by an individual educator to achieve her/his objectives. Planning of assessment is based on an individual's needs; here educators give different reasons for their assessment such as formal and informal assessment, but a common factor was that all participants mentioned assessment tools and strategies as the point of departure in their assessment planning. They used strategies like class work, homework, tests, assignments, investigations, projects, memorandums, rubrics, research and examinations, as well as tools such as portfolios and checklists. Lastly, while there were different responses about the relevance of assessment tools in CAPS, most participants agreed that their relevance would be seen once the objective of assessment was achieved after marking learners' work.

5.2.6 Theme F: Miscellaneous issues

During the implementation of CAPS, all participants purported that there were challenges in terms of training of educators. The shortages of resources at schools as well as managing the few available resources like the internet, science kits and other apparatus was also a problem. Although CAPS is seen as an extension of NCS, it is better revised. CAPS leaves out unnecessary concepts such as the range statements, integrates all learning areas together and reduces workload such as paperwork. However, even though National Protocol Assessment has been included, the level of improvement is too little. Yes, paperwork had been reduced, but the issue of improving the level of education has not been achieved. The subject matter is still the same, apart from the removal of critical outcomes, specific outcomes and learning outcomes.

In terms of improving teaching and learning by educators, the researcher believes that the availability of resources and proper training of educators will improve the standard of teaching and learning in South African schools. The first thing to do is to find a way of motivating learners, and second is the reduction of the learner-teacher ratio from 80 learners in a class to a reasonable and controllable number.

Classroom policy must be added to the existing policies of CAPS. Classroom practice emerges from a desire to learn. Policy-makers are not deliberately creating policies that are unreasonable, unworkable or unnecessary, but they do need to take into account the views of both urban and rural educators. The reality is that classrooms are now uncontrollable due to the policies made by people who are not educators. There is nothing currently within my control as a classroom teacher.

My recommendation is that learners must be supplied with proper textbooks, have access to libraries, and laboratories must be built in schools as well as computer labs. This must be in line with the recommendations of Felder and Brent (1999: 14), in that measures must be applied to obtain an accurate picture of learners' content knowledge and skills, where tests, performances and exhibitions, project reports, learning blogs and journals, meta-cognitive reflection, observation checklists, graphic organisers, interviews, and conferences are used.

Above all, educators need to be evaluated so that it can be seen whether they are teaching what the curriculum expects them to teach. This must be done in order to prevent what Taylor and Tyler (2012: 2) criticises, that "educators are now more

effective at raising learners' achievement as compared to the previous years when they were evaluated". This means that educators need to be assessed every year in order to close any gaps in knowledge.

5.3 REFLECTIONS ON THE STUDY

In this study, the researcher witnessed Senior Phase educators demonstrating their knowledge of principles and policies in terms of teaching using their experiences of CAPS requirements. The researcher would have liked to include educators teaching Grades 10–12 as they might have contributed more towards the implementation of CAPS in the FET phase, but this study was limited to Senior Phase educators only. The view of including FET phase was also supported by Mr. Mathunjwa during the interview process, who suggested that a further study of similar kind be implemented at FET phase. For Mr. Mathunjwa, the FET phase educators should also be technologically knowledgeable in understanding the expectations of CAPS before it is implemented at their phase. This idea is in line with the vision of the DoE (2004: 17) that all South African learners should be technologically competent by the end of 2013.

The poor results of Grade 12 in 2015 in KZN schools was as a result of poor implementation of CAPS at Senior Phase and FET phase level. Most principals of schools visited by Parliament committees complained about poor infrastructure and lack of resources as the causes of poor performance of learners at their schools. The affected schools were from the uMzinyathi, Zululand, uMkhanyakude and uThungulu districts. In essence, the implementation of CAPS in teaching and learning depends on the availability of resources and infrastructure in a school.

As an educator who teaches Natural Science at Senior Phase level, I concur with the participants that a computer laboratory plays a vital role in teaching and learning of subjects like Technology and Natural Science. However, my experience taught me that computer laboratories are not the only infrastructure required as a solution in the teaching and learning of CAPS – the educator's mind-set needs to be well prepared to accept change. Educators should be exposed to the various resources that can encourage them to engage in teaching and learning of CAPS.

During the process of conducting this study, the researcher realised that training of educators and availability of resources play an important role in the implementation of CAPS. In most schools the researcher visited, resources for practical subjects like Technology and Natural Science were limited or sometimes not there at all. As the researcher said before, infrastructure plays a major role in this regard, but this does not necessarily mean that the computer laboratory is the only appropriate environment that can be employed to enhance teaching and learning. There are many methods educators can employ to implement CAPS in teaching and learning; this depends on the knowledge of an individual educator in terms of facilitating information and use of the technological devices in hand.

This study made the researcher realise that some educators still prefer to use the traditional method of teaching and learning, although the DBE through its policies has made it clear that learner-centeredness is the correct way of teaching CAPS. Lastly, the researcher's suggestion is that the whole education system must be reviewed to develop the minds and skills of learners.

5.4 LIMITATIONS OF THE STUDY

This study is not representation of all schools in the 11 districts in the Province of KZN. This study was confined to three districts in the Province of KZN, namely Zululand, uThungulu and uMzinyathi, due to time and fiscal constraints as well as travelling costs.

This study was conducted in English but sometimes clarity was given in isiZulu, depending on the flexibility of the educators. Independent schools were excluded from this study, since the researchers' target group was public schools, hence findings from this study cannot be generalised to all schools in KZN.

Due to the fact that CAPS was a new policy which was implemented in 2012, there were few books and little literature on this policy. Sometimes participants may not have been honest in their responses, and this may also impact the investigation. The researcher suggests a further study be conducted which will cover all 11 districts forming KZN Province in order to generalize the findings.

5.5 RECOMMENDATIONS

For the proper implementation of CAPS at Senior Phase (Grade 9), the researcher recommends that all stakeholders, including the DBE, must adhere to recommendations outlined below.

5.5.1 Amendment of CAPS policies

The policy document used by schools at Senior Phase level is a very good document, but some participants in this study had different views about CAPS policies. In the district of Zululand, for example, participants raised concerns about the difficulties in obtaining the resources prescribed by the CAPS policy document. Some participants suggested the amendment of CAPS policies, and recommended that the use of resources must be optional. They pointed out that disadvantaged schools have a shortage of resources. While the researcher still believes that CAPS is a good curriculum compared to the previous one, suggested amendments such as the use of resources in CAPS as proposed by participants are recommended.

5.5.2 Upgrading of qualifications by other educators

In some instances, educators teaching Senior Phase learners have a Secondary Teacher's Diploma or Primary Teacher's Diploma. Most of the educators possessing diplomas were trained before the transformation of the education system in SA. It is rare to find that more than 50% of educators teaching Senior Phase learners are fully qualified to teach that level. During the introduction of OBE, the DoE decided to introduce two-week workshops for the traditional educators. This was criticised by most stakeholders in the education sector. The decision to revise C2005 and the NCS did not solve the problem, because the curriculum implementers were still the same educators – who had not upgraded their qualifications. Even though the DoE decided to employ educators with Bachelor of Education degrees in Senior Phase, the numbers were too low. The cause was that the PPN at schools was still the same, and the positions at schools were occupied by traditional educators. The researcher of this study recommends that all educators who were trained before the introduction of the new curriculum must be given a four-year study leave. Then the DoE must make arrangements with the universities to retrain them for four years in order to upgrade

their qualifications. The programme must be facilitated with all teacher unions in order to avoid resistance.

5.5.3 Educator-centeredness versus learner-centeredness

During the era of traditional education, educators were allowed to use talk and chalk (narrative) teaching methods. It was not correct to for the DBE to abolish the narrative method. That method should be used together with the self-discovery method. The researcher does not deny that CAPS is about learner-centeredness, but for the good of our education, learner-centeredness must be mixed with educator-centeredness. This must be done by allowing educators to demonstrate a variety of teaching methods in order to attract the attention of learners. Self-discovery learning by learners will supplement the demonstrations done by educators during lesson presentations. The researcher recommends that learner-centeredness must be used together with educator-centeredness during lesson presentation in order to enhance the understanding of subject matter by learners.

5.5.4 Identification of relevant resources

During the discussion of resources in this study, participants raised concerns about the prescribed resources in the policy document. Curriculum designers designed CAPS policy documents as if all schools were the same. Resources to be used by educators and learners are listed in the CAPS policy documents. Environments are not the same; therefore, learners must be encouraged to bring models to classrooms to replace actual resources like computers.

5.5.5 Strategies of knowledge testing

CAPS was introduced in 2009 for many reasons, one of them being that knowledge testing at Senior Phase was limited. Formal examination was not in place at Senior Phase during the period of the NCS. Complaints from educators about the level of the education system during that period led to the introduction of CAPS. The DoE decided to revise the NCS, and added a few aspects like formal testing. The existing knowledge testing in CAPS is not different from the old ways of testing during the period of Bantu

education. During the apartheid era, learners were evaluated through tests and examinations. In CAPS classroom tests, activities and projects are called school-based assessments; nothing has changed from the traditional testing, except for renaming it. The researcher of this study suggests that curriculum developers investigate new strategies for knowledge testing in order to improve the education system of SA. SA needs new, innovative ways in order to be able to compare its education system with international standards.

5.5.6 Issues related to the PPN

This study reveals that Senior Phase educators are not happy about the method used by the DBE to allocate educators to schools. The method of calculating PPN using the ratio of 30:1 is not applicable at schools, and it results in the overloading and a shortage of educators at Senior Phase level. Participants revealed that their duty loads determine the performance of their learners, stating that the performance of learners is better if the duty load is less, and poor if the duty load is high. In conclusion, the researcher of this study recommends that each grade must be allocated two educators per grade in Senior Phase in order to have a fair and equitable sharing of duty loads.

5.6 CONCLUSION

This study was a journey to improve teaching and learning of Natural Science at Grade 9 level using CAPS principles, and this chapter finalises the investigation of the implementation of CAPS at Grade 9. The review of literature in Chapter two indicated that there is still a gap in teaching of CAPS in schools. Chapter three outlined different steps to be followed in order to respond to the research questions and the use of different methodological approaches, and the findings of the study were discussed in Chapter four.

The suggested strategy for effective implementation of CAPS in teaching and learning in this chapter gives guidance for the improvement of our education system. My suggestion is that if the implementation of CAPS in schools is properly done and the explanations of how to assist educators in their planning are taken on board, the pedagogical practices will be of high standard. Hiccups along the way could not be as huge as they are today.

The limitations of the study give the readers an idea of issues throughout the study that could have hindered achievement of the expected results. As the study was progressing, the researcher was able to identify gaps and loopholes that suggest requirements for further studies.

Further studies are necessary as new information is required to contribute towards the current research knowledge. Lastly, my recommendations will help to close identified gaps in this study.

My reflection about this study serves to conclude that the DBE must carry out an investigation of how CAPS was implemented at Senior Phase level in the Province of KZN.

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APPENDIX A: TRANSCRIPT

A. Questions based on principles of Caps

1 What is your understanding of the Curriculum and Assessment Policy Statement principles?

- Miss Cricket of Inzululwane high school responded by stating that “the principles of Curriculum and Assessment Policy Statement are aimed at to insure that they close the gap that was caused by the educational imbalances of the past”.
- Mrs. Ballpoint said “CAPS principles assist educators and the school as a whole in practice and as basics for continuing review, evaluation and improvements.
- Mr. Mtshali said “CAPS is based on set of outcomes of each subject, it requires a learner-centered, learner-pace, skill-based approach in all classrooms and from all educators. Difference approaches to assessment; particularly continuous assessment is required in order to do justice to learners”.
- Mr Trigonometry answered this question by saying “CAPS principles ensure that the educational imbalances of the past are redressed, in such that equal educational opportunities are provided for all sections of the population.
- Mrs.Kubheka said “Curriculum principles assist educators and schools in their practice and as a basis for continual review, evaluation and improvement. These principles are used nationally, provincially, locally and at school level by educators in order to improve teaching and learning”.
- MrMathunjwa said “My understanding of CAPS principles is that it makes quality lives of all citizens and free the potential of each person”.
- Miss Msweli said “It is an attempt to communicate the essential features and principles of educational proposal in such a form that is open to critical scrutiny and capable of effective translation in to practice. It includes formal and informal, overt and covert recognised and overlooked intentional and unintentional designs”.
- Miss Mncanyana said “It is a tool that assists educators and school in their practice and as a basis for continuing review, evaluation and improvement. They apply to curriculum at national, education authority, school and individual levels and must be taken into account for all learners”.

- Mr. Ndabezitha said “My understanding of the curriculum principles is that educational imbalances of the past are redressed and there must be equal educational opportunities for everyone, and that all South Africans have to be educational affirmed through their potential”.

2. What is the purpose of Curriculum and Assessment Policy Statement principles in teaching and learning situation?

- Miss Cricket said “The purpose of these principles in teaching and learning is to equip learners with the knowledge and skills for self-fulfillment and to participate meaningfully in the society”. She further stated that “to provide access to higher education and to facilitate the transition of learners from education institutions to the workplaces and provide employers with a sufficient profile of learners’ competences”.
- Mrs. Ballpoint said “These principles give expression to the knowledge, skills and values worth learning in South African schools. They aim to ensure that learners acquire and apply knowledge and skills in ways that are meaning to their lives, and these principles facilitate the transition of learners from educational institution to the workplace as well as access to education”.
- Mr. Mtshali said “The purpose of these principles is to provide a new way of teaching, use of new textbooks and other learner teacher support materials. It also helps to develop a high level of knowledge and skills in learners which brings about the new and comprehensive change of content and style in all subjects. It sets high expectations of what all South African learners can achieve”.
- Mr. Trigonometry’s response “The purpose of these principles is to equip learners, irrespective of their socio-economic background, race, gender, physical ability or intellectual ability, with knowledge, skills and values necessary for self-fulfillment and meaningful participation in society as citizen of free country”.
- Mrs. Kubheka said “It was implanted to address the poor state of education and to improve learning and the work of educators. Schooling is strengthened through the use of these principles. Another purpose is that they encourage regular assessment”.
- Mr. Mathunjwa said “The purpose of these principles in teaching and learning situation is to describe knowledge, skills and values that learners should acquire by the end of the Further Education and Training band”.

- Miss Msweli said “These are design principles that assist a learner and a teacher. The application is both at an organizational level, in the classroom, or in any settings where young people are learners”.
- Miss Mncanyana said “Principles will assist educators and school in their practice and as a basis of continuing review, evaluation and improvement. They are also designed to assist learners and educators to be both applied at organizational level, classroom and any setting where young generations are gathered”.
- Mr Ndabezitha said “The purpose of these principles is that as educators we have to look at them when we plan our lessons or during teaching and learning these principles must be met”.

3. Can you highlight some few Curriculum and Assessment Policy Statement principles that you often consider in your planning?

- Miss Cricket said “To encourage learners to be active and think critically rather than rote learning and to encourage learners to achieve high knowledge and high skills at each and every grade in all subjects”.
- Mrs. Ballpoint’ said “In my planning I consider active and critical learning, high knowledge and skills, credibility, quality and efficiency, human rights, inclusivity, environment and social justice”.
- Mr. Mtshali said “High knowledge and high skills, integration and applied competence, and progression”
- Mr. Trigonometry said “Yes, active and critical learning, high knowledge and high skills, credibility, quality and efficiency”.
- Mrs. Kubheka said “In my planning I consider social justice, healthy environment, human rights and inclusivity, high level of skills and knowledge, clarity and accessibility, progression and integration, and assessment”.
- Mr. Mathunjwa answered by saying, “I consider outcomes-based education, high knowledge and high skills, integration and applied competence, and progression”.
- Miss Msweli answered as follows “*Challenges and enjoyment*: children and young people should find their learning challenging and motivating. At all stages, learners should experience an appropriate level of challenge. *Breath*: all children should have opportunities for a broad suitable weighted range of experiences. The curriculum should be organised in such that learners must learn through a variety of contexts

within the classroom and outside the classroom. *Progression*: learners should experience continuous progression from the age 3 to 18 years within the single curriculum framework. Each stage should build upon earlier knowledge and achievements. *Depth*: there should be opportunities for learners to develop their capacity for different types of thinking and learning. *Personalization and choice*: curriculum should respond to individual needs and support particular talents. *Coherence*: there should be clear links between different aspects of children's learning, which includes opportunities for extended activities of different strands. *Relevance*: learners should notice the value of what they learn and its relevance to their lives".

- Miss Mncanyana said "The principles I consider in my planning are the learning challenges of learners, the progression of learners, the achievement of advance level of understanding, individual needs and talents of learners, opportunities for extended learning activities of gifted learners and the relevance of learners lives in the present and the future".
- Mr. Ndabezitha said "I usually consider social and environmental justice, human rights, inclusivity, high knowledge and high skills, integration and applied competencies and outcomes based principles".

4. How do you use Curriculum and Assessment Policy Statement principles in your teaching practices?

- Miss Cricket said "I use these principles by giving learners the assignments and projects as well as to encourage them to go and get information for themselves in the libraries. Group work is very effective when I use these principles, it is easy to identify those who need extra time and give those who grasp fast some more work to do".
- Mrs. Ballpoint's response "I use CAPS to arouse interests of activeness and critical learning of my learners by motivating them and to encourage them to be active by using critical approach during my lesson presentation".
- Mr. Mtshali said "The proper planning for the whole year is very important. The lesson plan must be learner-centered and it must accommodate all learners. The knowledge that the learners obtain must be link to other subjects. Learners must be grouped so that they learn to work together".

- Mr. Trigonometry responded by saying “I encourage learners to think on their own rather and discover facts rather than giving them all the information. The minimum standards of knowledge and skills to be achieved at each grade are specified and set high”.
- Mrs. Kubheka said “I provide opportunities for learners to analyze and research. I involve learners in decision making about code of conduct and re-enforce positive behaviors amongst learners. I create opportunities to relate my subject to the broader social goal of promoting human rights. I use assessment strategies provided in the CAPS as a framework to ensure that learners develop high level of knowledge and skills. I ensure that learners are progressing correctly through the knowledge and skills required by CAPS”.
- Mr. Mathunjwa’s answer is “I use outcomes-based principles as a learner centered and activity based approach to education because it encourages independent learning. The high knowledge and skills’ principle is used to specify the minimum standards of knowledge and skills to be achieved in senior phase grades. Integration of knowledge is crucial for achieving applied competence as defined in National Qualification Framework and lastly I use progression in developing more advanced and complex knowledge and skills since subject statements show progression from one grade to another”.
- Miss Msweli said “Most commonly used principles are expectation, inclusion and learning. These principles are demonstrated in classroom through reflection on learners work, topic choices, questions for investigations, tasks as well as discussions about learners’ progression. I normally operate as facilitator”.
- Miss Mncanyana said “These principles are always included in my lesson plan, class activities, assignments, tests and in any other assessment. The reason for including them is that learners must demonstrate these principles in classrooms through opportunities given to reflect and decide their learning steps, goals, choices, questions for investigations as well as to discuss their progress and achievement with educators and parents”.
- Mr. Ndabezitha said “I ensure that each and every lesson I plan is learner- centered. My lesson also ensures that everyone is accommodated and brings the information he/she gained irrespective of the place of residence”.

5. How does your knowledge and understanding of the Curriculum and Assessment Policy Statement principles influence your teaching?

- Miss Cricket said “My knowledge and understanding of these principles make it easy for the learners to be involved actively in the lesson and learn with understanding”.
- Mrs. Ballpoint said “The understanding of CAPS principles help me to involve learners during teaching and learning periods (learner participation)”.
- Mr. Mtshali said “By having a clear understanding of what to do and which textbooks or other teaching and learning materials to use. It also reduces my problems when preparing lesson plan and subject content. It helps me to understand assessment techniques”.
- Mr. Trigonometry said “My knowledge and understanding of curriculum principles influence my teaching in such that I address barriers in the classroom using various scientific strategies”.
- Mrs. Kubheka said “It creates a healthy classroom environment and makes learners to be confident, independent, multi-skills and respectful and be able to participate in society activities”.
- Mr. Mathunjwa replied by saying “My understanding of CAPS principle have influenced me to believe that any unqualified educator cannot cope in teaching learners without being attended in-service training workshop and supervised by a qualified and experienced educator who has basic understanding of the previous curriculum”.
- Miss Msweli said “It creates a conducive environment for all types of learners even those who are challenged physically and mentally. All learners get equal opportunities. Educators are no more dictators but are facilitators”.
- Miss Mncanyana said “These principles influence my teaching in such a way that every planning I make includes these principles, and these principles reveal hidden talents and skills from my learners”.
- Mr. Ndabezitha said “These principles ensure that when I come to class I am fully prepared for each and every lesson. I am prepared for the challenges that I will be faced with. I must know what is it that my learners have to achieve. I ensure that learning environment is conducive, teaching and learning is taking place effectively. No learner is feeling inferior or discriminated”.

B. Questions based on training programmes educators received

1. What kind of Curriculum and Assessment Policy Statement training have you received?

- Miss Cricket said “I attended different trainings like workshops, staff development and networking”.
- Mrs. Ballpoint answered by saying, “Firstly, I want to say the workshops I received during the implementation of OBE helped me to understand the basic principles of NCS then it was followed by the workshops and cluster workshops of CAPS in 2010”.
- Mr. Mtshali said “Several workshops conducted by subject advisors helped me a lot. School visits by subject advisors and the supply of relevant documents by them also contributed”.
- Similarly Mr Trigonometry received workshops, cluster meetings and subject meetings.
- Mrs. Kubheka said “I have received training in the form of workshops that are conducted by subject advisors each year. These workshops are conducted at the beginning of the year”.
- Mr Mathunjwa said “The training I attended was workshops only”.
- According to Miss Msweli, she said “there are annual workshops which take for a day or two in the beginning of each year or just after the first semester”.
- Miss Mncanyana said “I attended workshops offered before CAPS implementation, in-service training, and other workshops organised by the district together with subject advisors”.
- Mr Ndabezitha said “I attended different workshops about the implementation of Curriculum and Assessment Policy Statement”.

2. To what extent has the Curriculum and Assessment Policy Statement training empowered you?

- Miss Cricket said “It made me a better teacher, in such a way that I do my planning in a very professional way and do my assessment properly”.
- Mrs. Ballpoint replied by saying, “CAPS training empowered me in such a way that now I do understand the principles and have knowledge of how to plan my lesson”.
- Mr. Mtshali said “There is an improvement in the way I deliver my lesson presentation, and the end point of the results is very good now”.

- Mr Trigonometry said “I gained different teaching skills and I was also trained to tackle new topics”.
- Mrs. Kubheka said “Subject Advisors give the best possible training and support in such a way that my practice has improved”.
- Accordingly, Mr Mathunjwa responded by saying “CAPS has made me to understand what is expected from me as the facilitator as well as what the learners expected to do in terms of their learning”.
- Miss Msweli responded by stating that, “Being able to deliver the subject matter in class and be able to facilitate learners giving them opportunities to contribute with their prior knowledge empowered me, rather than dictating learners with information. This is done through Bloom’s Taxonomy to create an environment that allows learners to co-operate and participate freely, but mostly workshops help me to improve teaching skills”.
- Miss Mncanyana said “Subject advisors prepare booklets hand-outs. These hand-outs present step by step of how to go about teaching a particular theme in learning are. Hence it is easier to deliver the subject matter in class and be able to facilitate not dictate information. They also empower me to accommodate learners during teaching in class, informal and formal assessment”.
- Mr Ndabezitha said “These workshops have empowered me in such a way that I know what is expected from me as an educator for example to teach learners to gain knowledge and skills, to make them to be responsible citizen, to be independent, how to use different resources and how to divide learners into different groups”.

C. Questions based on instructional planning

1. How does your planning meet Curriculum and Assessment Policy Statement implementation requirements?

- Miss Cricket said “After attending workshops my planning became better than before, it now meet entirely the requirements of the curriculum which now include the assessment part”.
- Mrs. Ballpoint said “My technological experience, knowledge and the empowerment received during my training make me to plan according to the requirements of CAPS policies”.

- Mr. Mtshali said “If my planning and the use of resources has followed properly, as per policy document, my planning do meet the CAPS requirements”.
- Mr Trigonometry responded “My planning meet curriculum implementation requirements in such a way that inclusivity is the central part of my planning and teaching”.
- Mrs. Kubheka said “Using CAPS makes it easier to address the diverse needs of learners. In CAPS I know what should I teach how I should teach it and how should I assess learners?”
- Mr Mathunjwa said “I usually design a programme of assessment where all the topics are fitted in”.
- Miss Msweli said “It has been made easier for me to get annual teaching plan which specifically tells me what to teach, in weeks and the aspects of the subject matter to be taught, this makes my lesson plan to be easy to design”.
- Miss Mncanyana said “With a programme of assessment and annual teaching plan, planning has made easier for me because these tools tell me what do, in which weeks and aspect of the subject matter to teach”.
- Mr Ndabezitha said “My planning meet CAPS requirements in such a way that my learners can work in groups without my facilitation. My learners have developed high knowledge and skills. My learners have developed skills of collection, analyzing, organizing and evaluating information gathered by them”.

2. How do you handle the challenges you experience in instructional planning?

- Miss Cricket said “I attended more workshops for planning, attended cluster meetings, attended staff development and lot of networking; therefore this helped me a lot to get more information and have more knowledge to improve my planning to meet curriculum implementation”.
- Mrs. Ballpoint said “My first resource is the policy document, followed by different types of technology textbooks, but if the problem persists then my last resort is to consult neighbouring school educators who teach technology on the same grade as I teach”.
- Mr. Mtshali said “Subject Advisors provide us with their cellphone numbers in order to contact them if we encounter problems. At school I contact other educators including my HOD, as well as to use internet, different books and magazines”.

- “I use various practical and theoretical strategies such as those included in the Department of Basic Education’s guidelines for Inclusive Teaching and Learning” Mr Trigonometry answered.
- Mrs. Kubheka said “In my planning I arrange that I have control over to compensate the factors that I do not have control over them. In classroom arrangements, learners are made to follow rules and routines. I plan my lesson taken in to considerations of prior knowledge of learners”.
- Mr Mathunjwa said “I handle the challenges by having extra classes to cover the designed programme of assessment”.
- Miss Msweli said “There are three types of instructional planning, namely course planning, unit planning and lesson planning, but to answer your question specifically I will concentrate on lesson planning. I will use the available resources to plan my lesson but also allow learners to research more information and bring it back to the class to their ideas”.
- Miss Mncanyana said “I consult my subject advisors or if HOD has a solution I rely to him. Sometimes challenges are not resolvable due to shortage of resources like computer laboratories; in that case I only rely on theoretical explanation”.
- Mr Ndabezitha said “In case of difficulties I consult subject advisors or my HOD. I also combine with others to do a team teaching. Lastly, I use resources like internet, magazines, newspapers and other available resources”.

D. Questions based on educators’ experiences in curriculum practices

(i) Language use

1. What is the language of teaching and learning in your phase and how do you view it?

- Miss Cricket said “The language of teaching in the senior phase is English and it is hard to teach mathematics in English without using IsiZulu which is the mother tongue of most of the learner in my school”.
- Mrs. Ballpoint said “It is English and sometimes learners may not understand instructions”.
- Mr. Mtshali said “Since books and assessment is written in English therefore my language of teaching and learning in my phase is English but as a teacher of a rural school I then use IsiZulu to explain some difficult concept written in English”.
- “The language of teaching and learning in my phase is English but sometimes I use IsiZulu if the learners are not clear of what is expected from them” said Mr Trigonometry.
- Mrs. Kubheka said “English is the medium of teaching and learning. The use of English as a medium of instruction makes the economy to grow and improves the career prospects of the younger generations. However learners uses mother tongue language at an early stage of education which leads to a better understanding of the curriculum content and to more positive attitude towards school. Using the learners’ home language makes learners to be more engaged in the learning process. Home language allows learners to make suggestions, answer questions and create communication of new knowledge with enthusiasm”.
- Mr Mathunjwa said “English is the language of teaching and learning, it is okay because it integrates with all other learning areas”.
- Similarly, Miss Msweli said “English is the language of teaching and learning, but as a teacher I sometimes find myself being compelled to use IsiZulu to clarify missed points during English usage”.
- Miss Mncanyana said “English is the prescribed language of teaching and learning, but sometimes if I feel that learners do not understand the subject content, I turn to use IsiZulu for clarification purpose”.
- Mr Ndabezitha said “I use English and I view it as the language which needs to be used together with IsiZulu in order for learner to understand the subject content”.

2. How does this language influence teaching and learning?

- Miss Cricket said “In English learners sometimes battles to understand the concepts in English whereas in IsiZulu learners understand content and instructions very easy because IsiZulu is their mother tongue language”.
- Mrs. Ballpoint responded by saying “English as a language plays an important role in teaching and learning since most of the books are written in English and it is easy for learners to understand most of the CAPS requirements as they are also written in English”.
- Mr. Mtshali said “Learners find it difficult to understand what the assessment questions want and the result of that is the failure of learners”.
- “The influence of English as a medium of instruction is negative to the understanding of the subject content in the side of learners” said Mr Trigonometry.
- Mrs. Kubheka said “English suppresses young learners’ potential and liberty to express them freely. It dulls the enthusiasm of young minds, inhabits their creativity and makes the learning experience unpleasant, all of which is bound to have a negative effect on learning outcomes”.
- Mr Mathunjwa said “It teaches learners how to communicate and learn as well as to understand other subjects content”.
- The response from Miss Msweli is “It negatively influence teaching and learning because during examination learners find it difficult to read questions written in English, or to understand and follow instructions since there is no assistant given during examinations”.
- Miss Mncanyana said “The influence of English is two way fold, on the positive side it helps learners to communicate with other races like whites and Indians but the negative side is that some of the learners do not succeed on their studies not that they not capable but due to the language barrier”.
- Mr Ndabezitha said “English helps learners to understand other subjects easily since most of other content subjects are written in English”.

(ii) Resources

1. How do you identify the relevance of resources to ensure that they facilitate teaching and learning?

- Miss Cricket said “I use the resources which are in the level of learners. For senior phase it is good to choose books with bright colours and written in big font size and must have colourful pictures to attract learners”.
- Mrs. Ballpoint said “I compare the textbook content with the policy requirements in order to align them and also use other relevant resources listed in policy document such as newspapers, internet and so on”.
- Mr. Mtshali said “Resources are prescribed and recommended by the policy guide, for me is to compromise with what resource is available at school or ask learners to bring resource model with them”.
- Mr Trigonometry said “I identify relevant resources by reading CAPS documents and subject assessment guidelines to ensure that they facilitate teaching and learning”.
- Mrs. Kubheka said “I use a wide range of stimulating and exciting materials to teach the concepts outlined in CAPS to ensure that learners are actively involved in their learning. I chose a textbook that is in line with CAPS aims and that contains the core elements of the curriculum. I ensure that the design of tasks and activities cater for learner diversity”.
- Mr Mathunjwa said “The identification of resources is based on the subject assessments; it must be relevant to the programme of assessment”.
- Miss Msweli said “The main resource is textbook; I start by comparing information of different textbooks written by different publishers, than I Google internet information to expand my knowledge, use CDs/DVDs, charts, pictures and study guides”.
- Miss Mncanyana said “I start with text books and compare them, than I choose the best explanatory textbook. From there I then turn to refer to policy guide and choose the resources recommended by CAPS policy guide”.
- Mr Ndabezitha said “The policy document helps me to select relevant resources”.

2. To what extent do your resources meet the requirements of curriculum implementation?

- Miss Cricket said “Resources like real objects are very useful, learners become more interested to the lesson. Learners can also be able to search information for them and become encouraged to think critically and be able to solve problems for themselves”.
- Mrs. Ballpoint said "Sometimes they do meet the requirements of CAPS depending on the availability of the prescribed resources”.
- Mr. Mtshali said “The resources I use are those that meet the curriculum requirements but sometimes they do not meet the objective of the lesson”.
- “Although I do have an excess of resources sometimes they do not meet the requirements of the curriculum implementation due to the fact that they are insufficient” said Mr Trigonometry.
- Mrs. Kubheka said “Unavailability of some resources such as internet and school library make it difficult to implement CAPS as some of the projects require learners to have access to the internet and other sources of information”.
- Mr Mathunjwa said “This depends on the programme of assessment versus the selection of relevant resources, sometimes it meets the requirements and sometimes it does not meet the requirements”.
- Miss Msweli said “With CAPS, policy documents of the annual teaching suggest that different resources must be used for each topic. That is why I use internet to research different resources relevant for my topic”.
- Miss Mncanyana said “The policy documents suggest that different resources must be identified and used. For me I normally use DVD’s, newspaper articles, magazines, tape recorders for listening skills, videos and books from different publishers. All these resources are recommended by CAPS policy guides and they do meet my intended objectives”.
- Mr Ndabezitha said “My resources do meet the requirements of CAPS; the evidence of this is that most of my learners pass my subject with high marks”.

3. How do you manage challenges relating to resources?

- Miss Cricket said “I ask for donations from different companies, do fundraising at school with help of other educators and buy some of the resources and organise the mobile library from the Department of Basic Education to come to my school and bring books requested by learners from the mobile library”.

- Mrs. Ballpoint said “It depends what type of resources are needed in that content but normal I request learners to bring resources for the following lesson, if the resources are not equal to the number of learners in a class, I instruct learners to share resources e.g. books”.
- Mr. Mtshali said “My school has a shortage of books because of that I compile notes so that learners must have something read and use them as a guide for different chapters in that they don’t have and do their own research taking from the notes”.
- Mr Trigonometry said “Rural schools have a big challenge of resources. I often improvise when conducting science experiments due to the unavailability of relevant apparatus. Sometimes I use my own money to buy teaching aids to ensure that the learner gets quality education”.
- Mrs. Kubheka said “As an educator, if I have extra information to give learners, I make copies. I also use internet to collect more information since my learners do not have access of internet”.
- Mr Mathunjwa said “I take time to choose the resources, if the chosen resource does not meet the objective, I use the teacher centered methodological approach rather than the learner centered method”.
- Miss Msweli replied by saying “With the shortage of textbooks at my school, I rely on making photocopies for learners and the use of internet”.
- Miss Mncanyana said “Actually proper resources required by CAPS are a bit problem but for me I usually request learners to bring resources and I download others using my personal internet”.
- Mr Ndabezitha said “I request my principal to order resources that are not available at school. I also request other educators whose subject policy prescribed resources similar to my subject policy”.

(iii) Teaching and learning

1. Which challenges do you encounter in curriculum implementation?

- Miss Cricket said “Lack of resources since the school does not have library, learner absents and overcrowding of learners in classrooms are the major challenges”.
- Mrs. Ballpoint said "Insufficient training let to us as educators not to implement CAPS properly, and the lack of resources contributed to poor implementation of CAPS”.

- Mr. Mtshali said “In subject like mine, we educators did not receive enough training of which resulted to the poor implementation of CAPS in my case”.
- Mr Trigonometry said “Lack of resources like textbooks, calculators and science kits is a great challenge. Lack of infrastructure such as libraries and laboratories is also a challenge”.
- Mrs. Kubheka said “Training given to educators does not accommodate learners with special educational needs. As educators we need training that is relevant to environmental contexts. As a rural educator, I cannot receive same training as an urban educator, since rural educators face different challenges such as language barrier”.
- Mr Mathunjwa said “The language used was too complex; sometimes it confused us as educators”.
- Miss Msweli said “Educators do not get enough training for curriculum to be implemented, as a result we educators learn while we teach learners which lead to many mistakes committed by us due to lack of knowledge”.
- Miss Mncanyana said “I did not get proper train. Some of the resources were unavailable there it was not easy to implement CAPS properly. Confusion amongst educators including me and learners is a result of non-proper implementation of CAPS at my school”.
- Mr Ndabezitha said “The time is not sufficient for all principles to be implemented. The overcrowding of classrooms makes me not to focus attentively to strengths and weaknesses of my learners. As English is a medium of instruction, most of my learners are struggling to write in this language”.

2. How do you identify learners’ strengths and weaknesses in your lesson?

- Miss Cricket said “During the lesson some learners do participate and become more actively involved, they ask questions and show the interest during my teaching period, engage fully in the debate during class activities but those who have weaknesses do not participate at all and seem to have no interest and they engage themselves in other things rather than to concentrate in lessons”.
- Mrs. Ballpoint’s response “In most cases learners with no difficulties in lesson participate on class activities and those with difficulties keep quiet and sometimes put their hands on their mouths or just totally fold their arms”.

- Mr. Mtshali said “It is very difficult to identify strengths and weaknesses as I am having large numbers of learners in my class. I have plus or minus 80 learners to teach in each class. Performance is only displayed in a written task. I only see the strength of those active learners but for the passive learners is very difficult”
- “Strengths and weaknesses of learners are identified through formal and informal assessment” said Mr Trigonometry.
- Mrs. Kubheka said “I identify strengths and weaknesses of learners by administering tests, written assessment, assignments and hands on projects, group activities and presentations”.
- Mr Mathunjwa said “Strengths and weaknesses of learners are identified during activities of learners”.
- Miss Msweli said “I believe informal assessment is the better tool which helps to identify learners’ strengths and weaknesses. Oral class works also help educators to know learners well since there is a direct interaction between teacher and a learner”.
- Miss Mncanyana said “My teaching experience taught me that any learner who struggles to cope in class does not participate in all activities, whereas gifted learners always dominate in group discussions as well as in class participation”.
- Mr Ndabezitha said “As I had mentioned before, it is difficult to cope due to overcrowding but those who happened to be identified, I mix the ones with strengths with weak learners to form a group and I also supervise them by giving guiding principles instead of giving them answers. I praise the weak ones when they contribute to group work and encourage them to participate in all group activities”.

3 How do you address these strengths and weaknesses?

- Miss Cricket said “I ask them to form groups and divide them according to their strengths and weaknesses and also give them different activities according to their groups and concentrates to those who are left behind”.
- Mrs. Ballpoint said “Extra time is given to those with difficulties whilst the gifted ones are given other activities”.
- Mr. Mtshali said “One of the ways to address these situations is to group learners but that needs a close supervision. Other way is to give more written work. Those who are not performing well are given extra work and assistance”.

- Mr Trigonometry said “I address the strengths and weaknesses of learners by giving class activities, home works and tests”.
- Mrs. Kubheka said “Group activities puts a learner’s social skills on display and identifies strengths or weakness with working as a team or leading a group of learners. Tests provide an accurate overview of how learners are learning and performing in a variety of subjects. Presentations can identify a learner’s ability regarding speaking skills and critical thinking expressions while offering in depth reflections, constructive feedback and oral advice”.
- Mr Mathunjwa said “I address them by forming mixed group discussions, where bright learners are mixed with slow learners”.
- Miss Msweli replied “I involve all learners in a class equally by encouraging those who are less participating by giving them opportunities to express themselves. I motivate learners by rewarding them if they have done well. When giving learners group tasks, I mix learners with more strength and those with weaknesses so that they can help each other. Extra classes, remedial classes, class works and home works are also essential to address these challenges”.
- Miss Mncanyana said “I address these weaknesses by giving more work for weak learners and give extra work for bright learners. I also mix less gifted and more gifted learners in group activities so that the ones with good strengths help the ones with poor strengths”.
- Mr Ndabezitha said “I address these strengths and weaknesses by talking to each and every learner as an individual. I give extra work and prepare another lesson that can accommodate all of them. I also co-opt the gifted learners to assist me by helping the weak learners. And I also give slow learners a second chance to re-do the same work whereas the gifted learners are given another challenging tasks”.

4 How does the current curriculum policy shape teaching and learning?

- Miss Cricket said “The current curriculum produces learners that are able to solve problems and make decisions using critical thinking, learners work effectively as individuals and as members of the team and also organise and manage themselves responsibly and effectively”.

- Mrs. Ballpoint said “This curriculum prepares learners for job opportunities and it makes it easier for industries to employ school leavers, therefore the country’s economy increases”.
- Mr. Mtshali said “This curriculum is more specific on what to teach and what learners must learn. Educators teach according to the curriculum policies”.
- “It addresses the inequalities brought by the apartheid education” said Mr Trigonometry.
- Mrs. Kubheka said “CAPS is an adjustment to what we teach and not how we teach. In other words it is a revised NCS. This curriculum review has the aim of lessening the administrative load on educators and ensuring that there is clear guidance and consistency for educators when teaching”.
- Mr Mathunjwa said “The current curriculum brought many change in such a way that critical and learning outcomes were removed from the new curriculum”.
- Miss Msweli said “It is more specific on what to teach and how to teach it. I do not teach what I want but what is expected from me, the attention is on what the learner must know at the end of the lesson”.
- Miss Mncanyana said “The current policy changes educators from traditional teaching and shape them into democratic teaching, where teaching and learning of the child consider the child’s centeredness not only what the teacher says”.
- Mr Ndabezitha said “By setting the learning outcomes to be achieved at the end of the education process, this curriculum policy shapes teaching and learning in a way that learners can reach their maximum learning potential. Now learners have skills, knowledge and in depended”.

5 Why do you think that the current curriculum policy makes a difference in teaching and learning?

- Miss Cricket said “It makes a difference in teaching and learning due to the centeredness of learners which allows them to search information for themselves, and it also makes learners to learn with understanding which allows learners to retrieve information themselves rather than rote learning”.
- Mrs. Ballpoint said “Honestly speaking there is no positive difference in CAPS except that it is an improved NCS because of minor changes where paperwork was reduced

and assessment techniques were also improved; that is what I can say it's a difference".

- Mr. Mtshali said "This curriculum is learner centered. Learners are required to research, which makes them to be independent whereas group discussions encourage interaction amongst themselves".
- "It provides clearer specifications of what to be taught and learnt on a term by term basis" said Mr Trigonometry.
- Mrs. Kubheka said "It addresses the concerns about educators who were overburdened with administration, underperformance of learners, different interpretations of the curriculum requirements and complains about the implementation of the NCS".
- MrMathunjwa said "The complex language has been reduced and now it's easy to understand what is required by the curriculum".
- Miss Msweli said "This curriculum is learner centered. Learners become independent which prepares them to be proper and responsible adulthoods. For me as a teacher is to facilitate and interact with them".
- Miss Mncanyana said "Now our learners are participative in teaching and learning and they can investigating and discover new things without the help of educators. Their self-discovery skills are enhanced. The learner intellectual thinking has improved since the introduction of CAPS".
- Mr. Ndabezitha said "This curriculum makes a different in teaching and learning, since learners are now exposed to relevant issues and different careers. There is less work for educators and learners can do peer-assessment and self-assessment. Theory and practice is now combined to make simpler understanding of learning for learners".

6. What are the inconsistencies between the curriculum policy and your practices?

- Miss Cricket said "Overcrowding of learners in classrooms are the causes of inconsistency, lack of space in the classrooms disturbs the normal teaching and learning as well as the group work, absenteeism and lack of resources".
- Mrs. Ballpoint said "Pupils' ratio compared to the post provisioning norm of the school. You may find that due to classroom overcrowding an educator may not have time to spend with less gifted learners or mark the activities of the learners".

- Mr. Mtshali said “Sometimes it is not easy to achieve what the curriculum stipulates due to environment. Other learners do not cope, for the fact that they are struggling as they are not exposed to resources like internet”.
- “Shortage and insufficient of resources causes the inconsistency in terms of teaching and learning” said Mr Trigonometry.
- Mrs. Kubheka said “Processes of change are scarce and do not correspond with the reality of the educational context. Knowing the practice of educators when designing the curriculum could contribute to the implementation of new models of professional development and training”.
- Mr Mathunjwa said “The lack of resources sometimes makes a gap between the curriculum policy and my practice”.
- In an interview with Miss Msweli, she said “The outcomes are sometimes unrealistic, the accommodate learners according to the environment where they live instead of being common in all schools in South Africa. This is of a result that learners come from different environments with different and unique resources which cannot be applicable to all schools in South Africa”.
- Miss Mncanyana said “The environmental problems, lack of resources and overcrowding in classroom are the major challenges in terms of consistencies and educator daily practice”.
- Mr Ndabezitha said “The inconsistency between curriculum and practice happens when the intended stipulated curriculum objective is not achieved at the end of the lesson. Sometimes learners are not doing what they supposed to do. In most cases learners struggle to do the work given to them”.

E. Questions based on assessment of learners

1. What do you understand about the concept “assessment” when implementing curriculum?

- Miss Cricket said “Assessment is a process of collecting information from learners to assist educators in making decisions about the progress of learners”.
- Mrs. Ballpoint said “It is a continuous planned process of identifying; gathering and interpreting information about the performance of learners using various tools”.

- Mr. Mtshali said “This is a tool which is by educators at schools to test whether learning and teaching has been successful. There is formal and informal assessment, where formal assessment occurs in the classroom to indicate the learner achievement, and the adequate evidence of achievement is collected using various forms of assessment”.
- Mr Trigonometry said “Assessment is a tool that is used to find out what the learners know. It is also the integral part of learning and teaching through formal and informal testing”.
- Mrs. Kubheka said “It is the process of gathering and discussing information from multiple and diverse sources in order to develop a deep understanding of what learners know, understand and can do with their knowledge as a result of their educational experiences or as the result of the process culminated when assessment results are used to improve subsequent learning”.
- Mr Mathunjwa said “Assessment refers to the activities given to the learners to test whether the objectives of the lesson has been achieved”.
- Miss Msweli answered “Assessment is the tool which is used to weigh knowledge and level of understanding of learners in schools. Assessment assist educators to make them aware of what learners know in order to do remedial work. Assessment is formal and sometimes informal”.
- Miss Mncanyana said “Assessment is measurement and evaluation of learners in terms of what they know and what they do not know. This is done through class works, tests, assignments, activities and examinations”.
- Mr Ndabezitha said “The concept assessment ensures that after learning has taken place, learners have to be tested to make sure that they have understood what they to know during teaching and learning. As educators our duties is to monitor testing and evaluation in order to record the progress of learners”.

2. How do you plan for assessment?

- Miss Cricket said “Since assessment is a formal and informal continuous assessment, I prepare tasks for my learners where the number of tasks depends on a particular subject per quarter”.
- Mrs. Ballpoint said “I plan it formally or informally where learners are given activities and tests and examinations”.

- Mr. Mtshali said “I make sure that assessment criteria are very clear to the learners before the assessment process takes place. This involves explaining to the learners which knowledge and skills are being assessed, length and expected responses. Lastly feedback is done in the form of whole class discussions or teacher-learner interaction”.
- Mr Trigonometry said “My planning always show types of assessment, date of assessment, duration of assessment and cognitive levels”.
- Mrs. Kubheka said “During my planning I must know why assessing my learners what to assess and how to assess it? Since the department of education supply schools with assessment plan, I must follow time frame given on the curriculum annual teaching plan”.
- Mr Mathunjwa said “Every end of the lesson I assess learners. This can be done though formal or informal assessment”.
- Miss Msweli said “I prepare assessment by collecting different notes and from those notes I then design short and long questions, depending on what I want to achieve from learners”.
- Miss Mncanyana said “Every end of the lesson, chapter, quarterly, half yearly or year-end learners are to be assessed in order to see that the objective of teaching and learning has been achieved”.
- Mr Ndabezitha said “I normally think about assessment after every lesson, it can be formal or informal. The objective is to evaluate learners understanding, whereas end of semester or yearly assessment is for promotion purpose. When planning assessment I use cognitive levels to enter marks for learners. These levels are based on knowledge recall listed in a low order. There are those on the middle order where learners have to apply skills, understanding, diagnostic and strategic. High order questions are those questions where learners have to analyze, interpret synthesis, create and evaluate”.

3 Which assessment strategies and tools do you use to collect evidence of learners' learning?

- Miss Cricket said “Knowledge and Skills are being assessed; classroom assessment is done every day informal and formally, whereas informal assessment builds towards

formal assessment and formal assessment assesses the progression of a learner in a particular subject”.

- Mrs. Ballpoint said “I use strategies and tools like class activities which may be used to measure learner performance which provides opportunities for learners to demonstrate skills, knowledge, values and attitudes”.
- Mr. Mtshali said “Some of the assessments are conducted orally and some are given as written work for example home works, class works, assignments, tests, worksheets and projects”.
- “I use classwork, homework, test, assignments, investigations, projects, memorandum, rubrics, research and examinations as assessment strategies” said Mr Trigonometry.
- Mrs. Kubheka said “I use class tests, assignments, peer assessment, group activities, projects, class presentation, class debates and class discussions”.
- Mr Mathunjwa said “I use control tests, assignments, research tasks, projects and examinations”.
- “I use group work and individual tools to assess my learners. Sometimes assessment is conducted orally but most of the time I give learners written work” said

Miss Msweli.

- Miss Mncanyana said “Class activities, testing, home-works, assignments, worksheets and examinations are the assessment strategies and tools I use to collect evidence of learner’s learning”.
- Mr Ndabezitha said “I use homework, class work, projects, assignments, tests, discussions, worksheets, and charts for tasks such as posters. This is how I collect evidence”.

4. How do you use these strategies and tools?

- Miss Cricket said “Checklist is used to list all the areas the teacher wants to assess, tasks are given to the learner and the number of tasks depends on a particular subject, assignments are given every Fridays and learner performances are recorded”.
- Mrs. Ballpoint said “Portfolios are used as evidence and previous question papers consisting of different cognitive levels”.

- Mr. Mtshali said “Written work of learners is collected and marked by myself or marked by learners but learners swap their exercise books so that they do not mark their own work. Answers are written on the board”.
 - “I often make copies of all tasks and distribute them to learners. Use memorandum and rubrics to mark learners’ work” said Mr Trigonometry.
 - Mrs. Kubheka said “Class tests allow learners to fully demonstrate what learners know by answering short questions, multiple choice, true/false and essay questions. Class presentation assesses oral skills and understanding of the content. Project assesses learners’ creations or innovations. Group activity assesses interpersonal, communication and collaborative skills. Peer assessment creates a classroom environment that makes learners confident to be boosted when given the chance mark their peers work”.
 - Mr Mathunjwa said “Control test are used without notes or books, assignments are the self-discovery knowledge resulting from the combination of different books and research, research is similar to assignments but it is the discovery of new knowledge and a project is a given task which has a specific period of completion”.
 - Miss Msweli said “Learners exchange their exercise books so that they do not mark their own work. Memorandum of what is assessed is written by me on board and the learners refer to it and mark their peer exercise books using pencils”.
 - Miss Mncanyana said “After assessment and marking of exercise books I give the chance to learners to analyze and correct their mistakes. I also open an opportunity of questions and clarity in terms of what has been assessed. Lastly I do sign learners’ exercise books after corrections. This makes me to get a chance for the evaluation of learners understanding”.
 - Mr Ndabezitha said “After teaching has taken place, I give learners homework to apply the knowledge gained during teaching and learning. Class work is given before the end of the period. I also give them assignments, projects and charts for posters with due dates. Where there is a lot of evidence to be collected I refer learners to use different resources such as newspapers and internet. Worksheets are given to them as classwork and discussions are done during lesson presentation”.
5. How relevant are the assessment strategies and tools that you use to the curriculum?

- Miss Cricket said “These assessment strategies are in line with the policies of the National Curriculum Statement, therefore they are relevant”.
- Mrs. Ballpoint said “They help me as the educator to see whether I have achieved my goals, also to diagnose learners’ problems and deal with those who need more attention”.
- Mr. Mtshali said “They are relevant because they are prescribed by the Department of Basic Education and these assessment strategies and tools make it easy to deal with large numbers in my classroom”.
- “I set the assessment strategies and tools using the previous examinations so that they are relevant to the curriculum” said Mr Trigonometry.
- Mrs.Kubheka said “The assessment strategies and tools I use prescribe by the department of basic not that every educator design the tools or strategies. There are relevant because there are there on the policy document”.
- MrMathunjwa said “these strategies depend on the effectiveness use of resources and the understanding of subject content by the learners”.
- Miss Msweli said “These assessment strategies and tools are prescribed by the Department of Basic Education, therefore these tools are very much relevant to this curriculum and they also work very well and help me a lot”.
- Miss Mncanyana said “These tools and strategies have been researched by subject and policy expects, therefore I have no doubt that if the educator use them correctly and effectively they are relevant to unlock the minds of our learners”.
- Mr. Ndabezitha said “Its relevance is seen when learners bring solutions within their groups. This is helpful because the integration of subjects like technology and natural science happens un-intentionally, and the combination of gifted learners together with less gifted or disabilities learners bring inclusivity in the class”.

F. Questions based on general understanding of Caps

1 What are the major challenges you experience in curriculum implementation in your context?

- Miss Cricket said “Overcrowding of learners in classrooms, too much work and less time, learners too slow to finish work and too much paperwork”.

- Mrs. Ballpoint said “Shortage of books, insufficient practical resources and unavailability of computers to access internet”.
- Mr. Mtshali said “Learners are not motivated to learn, they do not understand English whereas many subjects are written and taught in English. Things like libraries, internet café are far from school. There is also a shortage of books and we as educators need proper training”.
- “The major challenges I experience are lack of resources e.g. textbooks, stationery, library and laboratory” said Mr Trigonometry.
- Mrs.Kubheka said “It is very difficult to implement CAPS successfully since the funding is limited by this education system. Since the economy of the country is bad, CAPS implementation is also unsuccessful. The number of learners and educators kept on increasing but education budget is less compared to the increase of educator-learner ratio. Unavailability of sufficient facilities and equipment like classrooms, libraries, resource centers, furniture, and school buildings make it difficult to implement CAPS”.
- MrMathunjwa said “The use of elementary content, real life contexts, solving unfamiliar problems, communication, decision making by officials, integration of content with skills and insufficient training of educators”.
- Miss Msweli said “Lack of training for educators yet we are expected to do our best when teaching learners. It is hard to teach something that you are still learning yourself. I wish educators would be trained thoroughly before the implementation of any new curriculum”.
- Miss Mncanyana said “Like most of educators here at school, the lack of resources and poor training during the implementation of CAPS are the major challenges we all experience as educators of this century”.
- Mr. Ndabezitha said “As my school is in deep rural area, there are no libraries, internet café, books are scarce, and the problem of communication with learners due to new terminologies brought by new curriculum and the poor training I receive during pre-implementation phase”.

2. How do you view Curriculum and Assessment Policy Statement as an amendment of National Curriculum Statement?

- Miss Cricket said “Both Curriculum and Assessment Policy Statement and National Curriculum Statement are learner-centered, and they provide access to higher

education, the minimum standards of knowledge and skills are to be achieved and they both discourage rote learning”.

- Mrs. Ballpoint said “CAPS is similar to NCS but it is little bit improved because it involves National Protocol Assessment and reduces too much paperwork”.
- Mr. Mtshali said “The subject matter is still the same; the difference is that in CAPS there are no critical outcomes, specific outcomes or learning outcomes”.
- “Curriculum and Assessment Policy Statement is more clearer as compared to National Curriculum Statement, I know exactly what is expected from me to teach the subject topic” said Mr Trigonometry.
- Mrs. Kubheka said “CAPS is a changed curriculum not methodological change. CAPS now written in content format rather than the outcomes format it is more prone to traditional teacher methods rather than OBE methods”.
- Mr Mathunjwa said “CAPS is clearer than NCS since paper work has been reduced and difficult terminologies has been eliminated”.
- Miss Msweli said “The information is still the same; the only change is the time frame and the alignment of modules”.
- Miss Mncanyana said “There is no much difference between the two, except that NCS had too much paper work, whereas CAPS is a revised NCS where some of terminologies have been eliminated and assessment tools were added”.
- Mr. Ndabezitha said “CAPS is designed as a single comprehensive policy document developed for each subject to replace subject statements, learning programme guidelines and subject assessment guidelines in grades R-12. There are no critical outcomes, specific outcomes and learning outcomes as it was a case in NCS”.

3. How can you improve teaching and learning in your context?

- Miss Cricket said “I can improve teaching and learning by promoting reading of books and newspapers to the whole school in order for learners to be acquainted to the use of English language in content subjects”.
- Mrs. Ballpoint said “I will give extra lessons and activities to learners who adapt slowly to ensure that they do capture in order to be promoted by year end”.
- Mr. Mtshali said “The first thing is to find the way of motivating learners, secondly is the reduction of learner-teacher ratio from 80 learners in a class to a reasonable and

controllable number. Lastly learners must be supply with proper textbooks, libraries, laboratories to be built in schools as well as computer labs”.

- “I need support from SGB, SMT, Subject Advisors and Parents in order to improve teaching and learning” said Mr Trigonometry.
- Mrs. Kubheka said “classroom policy must be added to the existing policies of CAPS. Classroom practice emerges from a desire to learn. Policy-makers are not deliberately creating policies that unreasonable, unworkable or unnecessary but they need the views of us as educators, both urban and rural educators. The reality is that classrooms are now uncontrollable due to the policies make by people who are not educators. There is nothing currently within my control as a classroom teacher”.
- Mr Mathunjwa said “If I can be given more time to attend workshops and also be combined with educators from advantageous schools to share our problems with them”.
- Miss Msweli said “If I can be given such an opportunity, firstly I will reduce the number of learners per class, build more classrooms for those schools with high enrolment. Make to a must that all schools must use technological equipment like projectors, computers and internet during teaching and learning. Lastly, textbooks must be replaced with downloaded books through internet”.
- Miss Mncanyana said “I suggest that before a curriculum is changed, all relevant stake holders must have input not certain individuals like educators unions who are given chance to suggest what must be added, but all subject educators must make submissions to the task team”.
- Mr. Ndabezitha said “I can contribute to the improvement of teaching and learning by consulting subject advisors, subject specialists and my HODs, by using available resources at my school and within the community, by creating conducive learning environment, by getting support material from my principal and Department of Basic Education, by attending subject cluster meeting, and by planning my subject using available resources in line with the subject matter”.

APPENDIX B: INTERVIEW SCHEDULE

Teacher _____ School: _____

Grade: ____ Date of interview: _____

A. PRINCIPLES OF CAPS IMPLEMENTATION

1. What is your understanding of the CAPS principles?
2. What is the purpose of CAPS principles in teaching and learning situation?
3. Can you highlight some few CAPS principles that you often consider in your planning?
4. How do you use these principles in your teaching practices?
5. How does your knowledge and understanding of the CAPS principles influence your teaching?

B. TRAINING PROGRAMMES EDUCATORS RECEIVED

1. What kind of curriculum training have you received?
2. To what extent has the training empowered you?

C. INSTRUCTIONAL PLANNING

1. How does your planning meet the implementation of CAPS requirements?
2. How do you handle the challenges you experience in instructional planning?

D. EDUCATORS' EXPERIENCES IN CAPS PRACTICES

1. Language use

- What is the language of teaching and learning in your phase and how do you view it?
- How does this language influence teaching and learning?

2. Resources

- How do you identify the relevance of resources to ensure that they facilitate teaching and learning?
- To what extent do your resources meet the requirements of CAPS implementation?
- How do you manage challenges relating to resources?

3. Teaching and learning

- Which challenges do you encounter in CAPS implementation?
- How do you identify learners' strengths and weaknesses in your lesson?
- How do you address these?
- How does CAPS policy shape teaching and learning?
- How do you think the CAPS policy makes a difference in teaching and learning?
- What are the inconsistencies between the CAPS policy and your practices?

E. ASSESSMENT

1. What do you understand about the concept "assessment" when implementing CAPS?
2. How do you plan for assessment?
3. Which assessment strategies and tools do you use to collect evidence of learners' learning?
4. How do you use these strategies and tools?
5. How relevant are the assessment strategies and tools that you use to the CAPS?

F. GENERAL QUESTIONS

1. What are the major challenges you experience in CAPS implementation in your context?
2. How do you view CAPS as an amendment of NCS?
3. How can you improve teaching and learning in your context?

During interviews, the researcher will also observe the behavior of the respondents, the use of resources whether they are in line with the requirements of Curriculum and Assessment Policy Statement as well as to check the assessment tools and necessary documents. This is how observation schedule will be designed.

APPENDIX C: OBSERVATION SCHEDULE

School:_____Teacher_____.

Date of observation: Grade_____.

- ❖ Does the educator follow the principles of curriculum in planning classroom activities?
- ❖ Does the components of the lesson plan in line with what the teacher teaches?
- ❖ Does the educator use home language as medium of instruction?
- ❖ Does the methods used by educator in line with the prescribed curriculum?
- ❖ Is the lesson learner centered?
- ❖ Are resources relevant to the topic and bring concrete evidence to learners?
- ❖ Does the educator show skills or expertise of teaching the subject content?
- ❖ Are the assessment strategies in line with assessment principles of National Curriculum?
- ❖ Do the assessment tools report the actual learner performance?
- ❖ Are there any provisions for supporting learners with special needs?

APPENDIX D: LANGUAGE EDITING LETTER

L. Gething

WHIZZ@WORDS

PO Box 1155, Milnerton 7441, South Africa; tel 021 552 1515; cell 072 212 5417

18 October 2016

Muzonjani Zacharia Zulu

Editing of Doctor of Education (Curriculum Studies): Educators' conceptualisation of implementation of the curriculum and assessment policy statement in the Province of KwaZulu-Natal

I hereby declare that I carried out language editing of the body copy of the above thesis on behalf of Muzonjani Zacharia Zulu.

I am a professional writer and editor with many years of experience (e.g. 5 years on *SA Medical Journal*, 10 years heading the corporate communication division at the SA Medical Research Council), who specialises in Science and Technology editing - but am adept at editing in many different subject areas. I am a full member of the South African Freelancers' Association as well as of the Professional Editors' Association.

Yours sincerely

LEVERNE GETHING leverne@eject.co.za

APPENDIX E:

ETHICAL APPROVAL

REF # 2015/09/16/6745849/40/MC